

Way Beyond God



Far better ideas

P. Jensen

Way Beyond God—Far better ideas

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On the cover: The Very Large Array (of radio telescopes), Socorro, NM – Public Domain

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You can't go back and change the beginning, but you can start where you are and change the ending. --C.S. Lewis

Certainty, when not properly verified, is a form of ignorance. Acknowledging that "ignorance is bliss" gives the understanding that people will often cling to certainty in matters they do not fully understand. --zxsazxsa on Reddit

The truth will set you free, but first it will piss you off. --KinderUnhooked on Reddit

It takes courage and inner strength to read this book, so this book is dedicated to you for being brave and bold enough to read it to the end--and read it again.

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What this is

It's an awesome book.

—S. Christenson

This book is an epiphany—a sudden awakening to the true nature of things

Murder and devastation: Tanks, drone bombs, rocket-propelled grenades, car bombs, suicide vest bombs, scorched earth and whole cities obliterated. Thousands have died. Millions have fled. Thugs rule. Terrorists and nationalists—justified by their fervor—want most of us dead. Why? Their warped leader wants to destroy all opposition.

What do YOU want? Death and destruction or a positive future? This book will show that your future, and even the future of the human race, depend on what we each come to understand. But there are leaders that don't want us to know the truth. They hook people with their false reality. For their followers, the truth is then very different from what many were taught to believe, defend and spread. As a result, the truth seems counter intuitive, wrong and highly offensive to them. Their sense of values and personal identity are coupled to deeply-held, destructive and untruthful propaganda. This is the cause of much that is wrong in the world and the cause of so much war and terrorism. Instead, finding the truth is liberating and highly useful. Having an epiphany with the truth removes the false identity believers have had with their group's propaganda. Truth can win. It has for millions of us.

“The truth is not faith friendly.” —Robert Ritner

The truth means the way things really are in nature. That's it. That's all. It's not personal. It's not my truth, your truth or anyone else's assertion or claim. It overrides myths, opinions, beliefs, hopes, lies and theology because it is simply *the way things really are*.

Nature means everything that came to be, how it exists and how everything works throughout the universe, including here on this planet. The truth is all around us, yet it has been mostly impossible to see. Using extreme magnification, much of nature is now viewable for each of us to see for the first time in human history. Photos of some of it are in this book.

Totally wrong, impossible claims have been made about how things really are in nature. Some have wised up, but others still believe and spread completely goofy, old claims. They think the old claims are valid because they have been *traditional*, are considered *sacred* and must be *unquestionable* or followers get really offended. Many opportunists and clever bullies sell this ignorant certainty as truth and make huge incomes from it.

With some humor, this book will untangle that knot of tradition. It will take you from the nonsense and untruth into the stark, stunning, awesome view of how things really are in nature. Furthermore, in these chapters, you'll find rational, honest, proof-laden answers to big questions: **Where did we come from? Why are we here? Where are you going?**

This full-color edition—in PDF format—is free and easily read on any computer, ebook reader, tablet or smart phone. An added benefit is that the sources, proofs and background information are blue Internet links instead of footnotes or source references buried at the back of the book. With an Internet connection, just click on the blue links.

This is an easy book to read, but it takes time to digest. The benefits of finishing this book are liberating, but watch how much you want to fight and resist the truth. (How do I know that? It happened to me and I did that.) One could even do the unthinkable: Re-read this book for an even more profound experience. Read it seven times and you will be inspired to leave the world a better place than you found it, and you will know how to do it.

1. The Supernatural

...I am that I am...

—Yahweh, the ancient Hebrew god in Exodus 3:14



The Hebrews' god (Yahweh) as imagined by the painter Michelangelo - Wikimedia

Stayin' alive

Nuclear war is humanity's biggest survival threat. If hundreds of thermonuclear weapons were exploded, there would be no safe places on Earth. The smoke would cause the skies worldwide to darken for years, which, along with the toxic air, the loss of our crops, and the radioactivity, could kill us all—to the last person.

Today, humanity's existence is threatened by psychopaths and sociopaths aided by their religious-nationalist supporters! Justified by their brand of "sacred" nationalism, they want nuclear weapons. Nuclear weapons instantly cremate physical targets and people, not religious-nationalist ideologies. Even many religious American politicians and military officers anticipate a final, religion-based, nuclear war. ("A mother lode of really bad ideas." -- Sam Harris) But there should be a way to stop a dangerous mother lode of ideas without lighting afire a billion people and leaving the rest of us to wander like zombies in the rubble and the poisoned, cold, dark aftermath of nuclear war and then die an excruciating death.

We humans have nearly unlimited potential and a shot at unlimited expansion into the heavens. We can have an optimized future, so not annihilating ourselves is primary! To ensure that we don't all die, we have to fix our programming errors—the faulty ideas that often make us irrational, highly obedient to bad ideas and a hazard to our own survival. We need to run the programming fix on ourselves and everyone to avoid the fatal consequences of nuclear incineration. Nuclear Armageddon will be hell-fiery hell, not the beginning of a religious rapture with Jesus. The only thing human rising up to the sky will be smoke and ash, from burned people. Who, in their far-right mind, would ever want this? Insane leaders.



Russian President Putin with Russian church boss Kirill- Russian government photo

Many people don't want to confront their incorrect, core ideas. It's humiliating to realize one has erred. It's far easier to hide behind an old, traditional view of how things *should be* and *must be* to agree with the wrong, core ideas. The majority of people are doing it. Even some of the best thinkers have done this. But there's no safety in their numbers!

René rocks Europe

Let's have some fun with a famous, historical Frenchman named René Descartes. (1596-1650), or *Renatus Cartesius* in Latin. He greatly added to humanity's mathematical knowledge. He figured out the basics of analytic geometry, the use of algebra to solve problems in geometry. In fact, early analytic geometry was called *Cartesian geometry* in his honor. His discoveries in mathematics led to the development of calculus by Isaac Newton. Using calculus we can now navigate spacecraft to moving objects in space and return them to any spot on the moving Earth.

Descartes thought and wrote for days at a time. As a Catholic, he was interested in figuring out the intentions of the creator god in the *Bible*—the old man in Michelangelo's painting. But Descartes needed to verify his basic assumptions first. He needed to ask, “Is there any proof of such a supernatural being other than just our religious tradition?” Instead, he just assumed that physical reality *should be* and *must be* as implied in his religion's ancient holy book. Oops. Then on top of *that* assumption, Descartes next fell victim to silly, circular reasoning and speculation, insisting that a *good god* would not allow his believers to believe in the god's existence unless the god actually existed. Oops again!

Descartes' reasoning errors are still made today by millions of religious believers. Their errors are based on belief in *the supernatural*, the idea that the “real reality” is a heaven beyond Earth populated by all-powerful beings, and that gravity can be turned off for special, religious characters here on Earth and in the sky. It's all an unquestionable mystery from a tribal, religious past thousands of years ago. Imagining the supernatural is rote.

Descartes' feel-good speculations became sacred ideas and spread in Europe. Then others started speculating about the intentions of the biblical god. It got crazy! In 1667 the Roman Catholic Church banned Descartes' writings trying to put an end to all the threatening, pop theology. But it was too late. It could not be stopped. Suddenly, all kinds of new ideas in theology, philosophy, science and mathematics sprang up. Even Descartes absorbed new ideas from his fellow philosophers and mathematicians. They met—not at church—but over drinks at a pub at night.

“Come on God! Hurry up with the end of the world already!”

We’ve come a long way in 400 years since Descartes lived. Today there is a huge glut of information competing for our attention, like the latest news about politics, crimes, disasters, diseases, economics, weather, technology, science, religion, terrorism, celebrities and social media. Many people seek shelter from so much new, negative or emotionally overwhelming information. They escape into what they already know, into what is simple and entertaining, like novels, TV, video games and movies. Others escape into religious music or reading their religious scriptures again and again. They love the simple, ancient stories offered by old scriptures with tales about things supernatural, mystifying and epicly fateful, even doomsday. Reading them repeatedly becomes hypnotic entertainment. It becomes a *holy* assumption that every idea in those ancient stories is correct, that every supernatural event happened, that prophesies of destruction will all occur no matter what. Both Evangelicals and Islamists anticipate that their end-of-days prophesy will break loose before they die waiting. Some want to take action to make the prophesies self fulfilling. (See: <http://news.yahoo.com/the-doomsday-ideology-of-isis-192945938.html> and <https://endtimetruth.com/world-war-iii/nuclear-war-great-tribulation/>) But, this is like Narcissus in Greek mythology who became obsessed with his own perfect reflection. Prophesies become “circular proof” that those who live to see them come true are important and special players in god’s grand scheme of things. Believers feel divinely self-important.

Hoping and praying

The future is undetermined. You can design it, give it propulsion and steer it. The opposite is randomness, which has no propulsion or guidance. Planning your future sets a course to steer. Taking action gives you propulsion to guide. Randomness is what one gets if one has no plan, merely watching to see what will come. Being adrift without a plan or propulsion, many people live their entire lives just hoping and praying. Then they pass away. However, if you realize your error, tell everyone and find a new life in the realness. All good.

Too busy to do anything better

From churchgoers to prison-goers and nearly everyone else, most people think and behave within narrow limits according to what their peers think and do. Conforming is the path of least resistance. It seems right to them, but it becomes monotonous, stopping each one from learning and advancing. The people living in a highly monotonous culture generally resist new ideas. Billions of people live out their entire lives in this fashion with their peers. Adopting the new ideas, especially more complex ones, would bring change. People fear change most when they sense that they are far behind and unable to think outside their peers' identity, their box. They resist out of fear, loyalty and a dark pride.

Vital knowledge from science is often viewed as alien and dangerous by believers. Worse, science education does not fit with supernatural, religious beliefs. Science scares many students raised in a strong religion. Even worse, many students can’t learn fast. The slower learners are left to fail in our current educational system. All this combines to keep many—especially the highly religious—away from science and engineering courses.

Wanting the simplest, easiest answer

Nature is complex, but we like easy answers. The simple answer is deceptively attractive. This is commonly known as *Occam’s Razor*—after the 14th-century, Catholic theologian William of Ockham (Occam). *Razor* implies shaving down an explanation to its simplest. In the religions, the simplest explanation about the complexity of nature and our existence in it is “God works in mysterious ways.” This is the laziest answer possible.

Descartes' supernatural departure from Earth

As a philosopher, Descartes got another concept wrong. He said, "I think, therefore I am." ("Cogito, ergo sum," he wrote in Latin) This is the same as saying that THINKING = BEING IN EXISTENCE. It's an equation. All equations have to *equate* in both directions, forward *and* reverse. Descartes' statement does not hold up in the reverse direction, because a brain-damaged person who can't think can still be kept alive. For fun, let's make Descartes' equation work. Let's make his existence completely dependent upon his act of thinking. We will have to cheat—making it supernatural—to pull off such humor.

As usual, René Descartes spent all morning in bed working on his latest ideas. He wrote all afternoon and early evening as well. That night he walked into his favorite pub to meet with fellow philosophers. Descartes was obviously stressed. He was carrying the papers he had just written.

In a piercing voice, the bartender shouted out over the crowd, 'SO RENE! WHAT WILL IT BE? THE USUAL?' Irritated, Descartes screamed back at the obnoxious bartender, 'I DON'T KNOW. I CAN'T THINK RIGHT NOW!'

Instantly, there came the snapping sound of an implosion! His papers were caught in a small whirlwind and then slowly floated to the floor. Descartes had vanished, never to be seen again. (See https://en.wikipedia.org/wiki/Descartes%27_Error)

Special effects in imagery and sound can make *every* supernatural story seem very real in the movies. But nothing can operate supernaturally, outside the laws of physics that hold the universe, Planet Earth and our bodies together.

The supernatural is always fiction

Cop: "How did your car end up under this parked truck?"

Believer: "An angel appeared in front of me and I swerved."

Cop: "I'm going to give you a sobriety test."

An email from the afterlife

A Canadian couple needed a vacation in a warm climate at the end of a very cold winter. They booked a suite at an exclusive, Arizona desert resort. Because of a last minute business meeting, the wife had to leave a day later than her husband.

After an early flight and then checking in at the resort, the husband unpacked his new laptop computer and sent his wife a quick email. His fingers found the new keyboard a bit awkward at first. He got one letter wrong in her email address. Without seeing the mistake, he sent the email.

In Texas, a widow had just returned from her husband's funeral. He had been the pastor of a large church. She sat down to check her email, expecting more consoling messages from church members. After reading the first message, she screamed and passed out. It read:

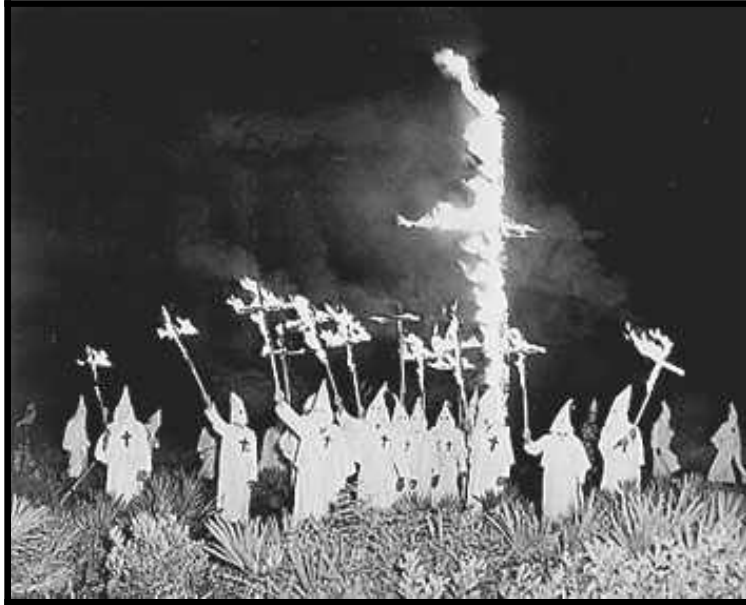
Subject: From your hubby

Text: It's so hot down here! I'll see you tomorrow.

2. People

You can safely assume that you have created God in your own image when it turns out that God hates all the same people you do.

—Tom the priest quoted by Anne Lamott



Christian Ku Klux Klansmen in Gainesville, Florida 1922 - Wikimedia

“Who am I if I don't belong to the group that defines me?”

What's your group identity? Are you full of your group's religious beliefs? Their political beliefs also? Is your potential fully realized or are you marching in group formation stifled, needing something far better and genuine? What would make your life far better and freer? Are you some traditional group's prisoner or are you free to go and find better?

Our self-identities do not like much change, not even when it's in our own best interest. Enhancement gets scary. It's the fear of going beyond the norm of our family and peers. Going beyond would set us apart and alone. Are you in a group that wants you to think, talk and act as they do? Almost everyone is. That's the nature of group identity. It glues you down and it glues the group together. In most religious groups, membership is considered very elite so that it completely masks the stunning loss of freedom.

Consider the self identity of Barack Obama. He was elected president by Native Americans, Caucasian Americans, African Americans, Asian Americans, Polynesian Americans and Hispanic Americans. Obama is half African and half Caucasian. Some African-Americans first said he wasn't black enough. They called him, “Not one of us.” White supremacists did not want a half black man to be the president of *their* country. They considered him, “Definitely not one of us!” One white politico said he hoped Obama failed. One black comedienne told Obama that if he failed he'd be called a “half-white guy” by black Americans. Are these views just racist, or is something else going on? Fear for profit? (See <http://www.rightwingwatch.org/content/rick-wiles-2015-predictions-obama-will-force-communism-america>)

Give people an opportunity and they will take sides, almost always based on their group self identity. That group self identity can unintentionally generate enemies and spin off needless resentments, even lasting hatreds. How does that work?

In a self-development seminar with 64 adults from all over the U.S., we were asked to do an exercise in a very large meeting room. It had all the tables and chairs removed. A line of masking tape on the carpeted floor divided the long room in half. We were told that we would be in a war.

The facilitator stood on the line, pointed and said, "This is the north side and this is the south side. Choose sides!" Immediately, one fellow from Louisiana walked to the south. The rest stood around for a few seconds and then walked to a side. Only two women said they didn't care which side they were on. We were asked later how we had chosen sides. Some replied that it had to do with where they were from, remembering the U.S. Civil War. By these decisions we had made enemies. Both sides ended up with almost equal numbers! (The same often happens in presidential election results.)

In our goofy war, we "killed" our enemies in staged battles by throwing small disks that struck them, or by freezing, not moving, for the longest time, and by Rock Paper Scissors games. If you lost, you "died" and had to lie down.

Finally, only two opponents were left and one beat the other in a game of chance. Immediately, some of the dead team members of the winning team jumped up and blurted out, "We're Number One!" and "In your face losers!"

The side that won received no prize. We were all the same and friendly to each other before the exercise, but not after. We all vividly remembered who had done what to whom. Some on both teams desperately wanted another chance. They wanted revenge. Even the winner was disrespected by a few on his *own* team because he had not died with the rest.

In the real world, with real consequences, *you* have chosen sides and enemies often by letting your favorite leaders define them for you. Those enemies may even be your own family members in a different identity group. We should have refused to split into two groups in the beginning, but we blindly did what the boss, the leader said. He knew the outcome.

Groups define themselves by their differences from others. It's easy for evil leaders to recruit people into a group and define the enemies. The group grows, by making the members feel special about themselves for belonging in the group and having enemies.

Flip-flopers and hard heads

In the September 10, 2007 issue of the scientific journal *Nature Neuroscience*, researchers at the University of California Los Angeles and New York University reported discovering two thinking styles in the groups they tested. The experiment used college students and found that they displayed either a liberal style or a conservative style in decision-making. The results showed that the liberals handled ambiguous problems and conflicting information easier than the conservatives, who required more structure to make decisions and then stuck stronger to their decisions once made.

Not making a decision can have disastrous results. Likewise, sticking to a bad decision can have disastrous results. Rarely is a decision perfect when first made. Only forward movement with adjustments based on new information can steer a safe course to a good objective. Still, some end up lost by only bearing hard right or hard left, instead of steering left and right as needed to an optimal outcome.

Temperaments

Consider this balance beam of people's political temperaments:

Anarcho-Socialists Liberals Rational Pragmatists Conservatives Anarcho-Libertarians



Balance invites progress. Pragmatists don't play team ideology. The time-wasting, political, ideological battles are driven by the under-thinking mobs of extremists on the far left and on the far right. (See <http://en.wikipedia.org/wiki/Ochlocracy>)

Far less distance separates moderate liberals and moderate conservatives. They are far more content with the social, political and economic status quo than are the resolute extremists of the far left or far right.

Also consider that pragmatists in the center are each *both* liberal and conservative in many aspects of their lives. They mildly disagree only about how *some* things need to change for the better or about what needs to stay the same.

The far left and far right ideologues want some radical changes in their favor. They try to keep their side polarized against the other side. Even many of those close to the center are forced to stay loyal to a side. This occurs every election. In this bipolar political system, both sides become increasingly unable to be self-critical. When elected, they often block out feedback about any bad results from their actions. This compounds their problems, becoming a disaster-prone syndrome called *groupthink*. (See Appendix D)

Conservative Utopia vs. Liberal Utopia

Both the American religious-capitalist right and the secular-socialist left deeply *believe* that if they can just run things their way, that an optimal society—a utopia—will develop. They both have strong emotions about what *feels right* to their temperaments and programming. One wants society structured for competition and winner-class privileges. The other wants equally-shared rewards from mutual efforts. It's the “raider-warrior” versus “the woman with lots of kids.” Not surprisingly, when empowered, each blames the other when their own principles and policies create even larger problems than they solve.

Typically, very conservative-minded people don't want change. They often want things how they were in an idealized, golden past. They associate their nostalgia with “how things should be.” It's a feel-good, group fantasy. Consider these seemingly opposed groups that are highly nostalgic and conservative:

- The ultra-strict Muslims of Saudi Arabia who revere their religion's 7th and 8th century history and laws
- The radical environmentalists of the Earth First! movement whose slogan is “Back to the Pleistocene!”—the time at the end of the last ice age when humans were few and lived by hunting and gathering. These followers may call themselves *progressives* but they are the farthest backward-focused of all, regressives
- Evangelical fundamentalists in the United States expecting Jesus to return to rule
- Ultra-orthodox Jews in Israel, Europe and the United States, Mennonites and Amish
- The remaining hardcore communists, still committed to the dysfunctional Marxist-Leninist economic ideology

Liberals, by contrast, want their “should be” list of changes made law with “social equality” for all so they can feel good together. It's another feel-good, group fantasy. Yet when empowered, they have often ended up creating a nation-wide welfare state with low productivity, oppressive restrictions and little room for individual action and leap-forward progress. An ultra-conservative politburo then rises as enforcer of the liberal revolution.

Pragmatists don't play team ideology. Ideology is always a group trap.

Even in progress-making cultures, change is not easy. It's like a giant ball being pushed forward, sideways and backward in a never-ending struggle that somehow manages to gain in the forward direction against the way things were. Instilling guilt in the opponents for pushing in the *wrong* direction is an effective tool of liberals and conservatives, but conservatives are better organized. Unlike liberals, sometimes staunch conservatives kill others trying to eliminate even the symbols of threatening change, especially in the fundamentalist Islamic religion.

It was a hot summer day in Iraq in 2006. Islamists stopped a car carrying a Sunni Arab tennis coach and two Shiite Arab tennis players. They told them to step out and then shot them to death. What was the offense? They were wearing tennis shorts—infidel attire.

Life in the zoo

Start with a large cage containing five apes. In the cage, hang a big cluster of bananas on a rope and put stairs under it.

Before long, an ape will go to the stairs to try to get the bananas. As soon as the ape touches the stairs spray him and all of the apes with extremely cold water. They all flee to a corner in pandemonium.

After a while another ape will again make the attempt to go to the stairs to reach the bananas. Spray her and all of the other apes with the cold water again. They all flee at high speed to a far corner.

Turn off the water. Leave the stairs and the bananas where they are. Later, another ape will timidly try to go to the stairs. All the other apes will attack her to prevent it, even though no water sprays them.

Next, remove one ape from the cage and replace him with a new ape. The new ape sees the bananas and enthusiastically goes toward the stairs. To his horror, all of the other apes attack him. After another attempt he knows that if he touches the stairs he will be assaulted.

Remove another of the original apes. Replace it with a new ape. The newcomer goes to get a banana and is attacked by all the other apes. The previous newcomer takes part in the attack with enthusiasm.

Again replace another of the original apes with a new one. The new ape goes to the stairs and is attacked as well.

Two of the four apes that beat him have no idea why they were not permitted to climb the stairs to get the bananas, or why they are participating in the beating of the newest ape!

After replacing the fourth and fifth original apes, none of the apes in the cage were ever sprayed with cold water, yet the group attacks any ape that tries to get close to the stairs leading to the bananas. Why? Because that's the way it has always been done around here.

An analogy between house paint and people's political polarizations

In the beginning there was only balance, it was a color called Pragmatic Purple. Like the color charting of a U.S. election, blue is for left (Democrat) and red is for right (Republican). Mix the two and you get purple, as balance.

But, it didn't start out that way. Originally there was only Pragmatic Purple. The red came from some people removing the blue from the Purple. The blue came from some people removing the red from the Purple.

The right-wing person looks at the Purple ideas and sees only his/her beloved red adulterated with that awful blue. If it's anything other than red, it must be from the evil blue team. But the left-wing person looks at the Purple ideas and sees only his/her beloved blue adulterated with that awful red. If it's anything other than blue, it must be from the evil red team. Therefore, the pragmatic, balanced solution gets rejected in highly polarized politics.

Conformity required

Both groups of extremists create their own red and blue zoos. Both the far left zoo and the far right zoo are highly restrictive. Both groups get angry when a traitor in *their* cage tries to think and act outside their color, outside their limited ideas, even when it is pragmatic, even when it would result in everyone's benefit.

Those on the far right want everyone in their mindset, supporting their leaders and spreading their ideas. When in power, they have no vision or end game for advancing the overall society either, but they see all the opportunities for plunder. It's "grab what you can while you can and try to stay in power." Their followers don't see this, but they become annoyed hearing the other side protesting. Some, as self-appointed enforcers, want to silence the other side's protests or do them harm. Add firearms, whipped up hatred and mental health issues to that mix and the far right starts killing the far left or anyone they suspect of not being on their side. The far left, adhering to non-lethal violence as a *modus operandi*, is generally self sacrificial (to their own death), not deadly in return.

Those on the far left want everyone in their mindset, voting for their candidates. They are appalled that greed has become the mindset, complete with tax-breaks for the ultra-ultra-wealthy. But they might plunge the country into a communist-socialist, totalitarian, anti-business state with no less nepotism and greed, if swept into power. Those on the right fear this. After all, communist countries turn into a stifled, oppressive, living hell for everyone but the guy at the top. Fidel Castro denied that he was a multi-millionaire. (See <http://nypost.com/2015/05/03/former-bodyguard-unmasks-fidel-castros-corrupt-double-life/>) Likewise, Kim Jong Un personally controls North Korea, as did his father and grandfather. The dictator's lifestyle is lavish amid the poverty and starvation of 13 million peasants. He now threatens nuclear war, executes anyone he wishes and has a teenage harem. (See <http://www.telegraph.co.uk/news/worldnews/asia/northkorea/11510664/Kim-Jong-un-brings-back-pleasure-troupe-entertainers.html>)

The American two-party, opposite-philosophies system often results in "winner-dominate-all" government. This can change every few years when one's *groupthink*, faulty values and special interests become dysfunctional and wreck things, even for their own supporters, like the Republican's mortgage-fraud financial crash of 2008.

You and I can still think and operate outside of the two extremes from the pragmatic middle. But polarized politics is just a symptom of something deeper that's going on. It's something over which most people have no control and it's pernicious. It's mental programming that produces near-total conformity in people. Its name is *ideology*. Propaganda is its methodology and the combination of fear-hatred is its control mechanism.

People don't like it when outsiders point out the failures of their group's ideology (religion or politics). It's not suppose to be scrutinized by anyone, just followed and promoted no matter how dysfunctional, absurd or offensive it is. (See <https://theweek.com/articles/441674/exiled-from-westboro-leaving-americas-most-hated-church>)

But life is short and the truth is worth finding out. Freedom from mind control (ideology) and freedom from the fearful hatred of others is absolutely, positively good.

3. Ideology

*An idea is something you have.
An ideology is something that has you.*

—Morris Berman

This is scary stuff!

A captivating, captive-taking ideology is a maze of explanations and rules based on well-flavored assumptions. We acquire ours from our family, peers and leaders. We get a shared and enforced model of reality, thought and behavior. It's powerful. It's an ingenious mental prison where we are all guards and also the prisoners! A psychopath could have it all manipulating this weak condition of want-to-believe people, and they do.

Next, consider that it's almost impossible to convince a person in a competing ideology of the need for your ideology. They routinely reject it. Why? Just like yours, their ideology prohibits changing ideologies. A few people switch religions or political parties, but it's hard. (They get called apostates.) Ideologies program people with guilt so we won't leave. Ideologies get a ride in our brains and we get a joyful illusion back: We experience the "high" of feeling one with the elite and powerful group hosting the same ideology.

There are many good and bad ideas that come and go, but they are not full-blown ideologies. *Ideologies thoroughly encode our brains.* Think of ideologies as *soothing hijackers*. They make us feel good, but they prevent us from thinking rationally about them. *They have us by the brains.* They program us for obedience and then put us with others who are also hijacked, programmed and obedient. They make us think and act according to how they can best survive and thrive. "Do this. Don't do that. Think this way. *Believe*. Recruit others."

Ideologies can even override our basic survival instinct. All robust ideologies take over our identities. They can even make us die defending them, like Christian and Islamic religious martyrs have died. But no Islamist can prove that nature is so arranged that there's an unseen paradise with virgins waiting for unlimited sex after dying for the religion. Socialist martyr Che Guevara could not prove that a social utopia would result from Marxist economics. Countries using Marxist economics later failed miserably. Che had killed people for that ideology *and* he also died for it. Some (often wearing t-shirts with his image) still *believe* in him and promote dystopian Marxist economics in the name of progress.

No matter how powerful one's faith, how stunning one's sincerity and certainty, those emotions do not change incorrect ideas into proven, correct ones. Instead, one has to reject *all* the emotions attached to one's ideology and find the true nature of things. It's invalid to claim that one's belief is the truth just because it feels powerful. Faith is cheap and effortless. (You just declare yours the true one because your ideology requires it.) However, finding nature's truth requires thorough investigation, discipline and testing—due diligence. So truth doesn't require any faith.

Are you easily hypnotized?

It was freshman orientation week at a university in San Diego. The school had a week of activities planned for the new students. One was the awesome hypnotist's show. He wore a tuxedo on stage in the semi-circular auditorium.

Softly he repeated over and over, "You feel very calm. You have no worries. You feel *so very* relaxed, so *veeerrrry* relaxed. You are going into a *deeeeee sleeeeeeep*. It feels *so* good, so *very* good." Then the hypnotist paused for a few moments before he said, "If you are now in a deep sleep, you will stand up."

Only half of the 12 volunteers, sitting in chairs on the semi-circular stage near the hypnotist, stood up. In the audience, we got a jolt because we expected something less spectacular. But what we *really* didn't expect was when a few of the audience members also stood up and froze in place. One fellow seated next to his suddenly-standing roommate said, "Not us stupid! Sit down!" He pulled on his arm, but the roommate could not pay attention, remained standing and did not move. The fellow was in shock that his roommate was suddenly frozen, under the control of the so-far-benign hypnotist. Two females in the audience, who were not hypnotized, gasped and ran up the aisle and out the double doors in absolute fear. The rest of us wanted to see more and know how this works. Then the hypnotist said, "You are a chicken." Immediately those standing in the audience and on stage started jerking their legs up and down in place, folded their arms into short, flapping wings and started making clucking sounds while making pecking movements with their heads and mouths.

This was so *uncool* that we knew our fellow freshmen were truly hypnotized. This was no prearranged spoof. They would never behave like this in front of their new peers! Nor were they capable of *acting* to this level straight-faced. We wondered how they were ever going to live it down during the next four years on campus. ("Fowl" and foul nicknames for them would soon be chosen by their dorm mates.)

Next, the hypnotist did something really spectacular. He escorted two hypnotized females on stage to two new chairs. He told them that their bodies were blocks of solid rock. Then he told a hypnotized, standing male that he was a very thick and strong plank of unbendable wood. The student froze in place. The hypnotist called for two male volunteers from the *awake* audience to help him. They came down on stage and lifted the rigid human plank. The hypnotist had positioned the seated females so that their legs were a little more than three feet apart. The strongmen then laid the rigid man face up across the seated females' legs, so that his head, neck and upper shoulders were on one woman's lap while his feet and ankles were on the other's lap. The hypnotist then told the heaviest of the strongmen to sit in the center of the plank and raise his feet off the floor. He did. The human plank did not bend! The women's legs did not move! Then he instructed them all to return to their seats. Lastly, the hypnotist instructed all who were hypnotized that they would remember everything when they awakened on the count of three. He counted to three, clapped his hands and released all of them from their hypnosis. They were stunned and bewildered as we clapped for them and the hypnotist in both awe and empathetic embarrassment. They looked disoriented and shell-shocked, back under their own control.

Less obvious hypnotists use the media for personal gain. As religious or political ideologists, *they don't release their subjects*, so how could you know if *you* were under their control? You would agree with their views. You would send them money, trash-talk their enemies, vote their way and *unfriend* anyone not in agreement. You're not really under your own control, but you feel "right" because it feels powerful to be in a group-think trance.

When people are hypnotized in a religious ideology

Church leaders' sermons and prayers are hypnotic. They often have the same tone used by hypnotists. It's commanding and emotional. It's also subliminal: "God is ours. We know the truth. You are one with us. It feels *so good* to worship and belong here with us."

In some ways this is like being on a large airplane with free liquor provided, not knowing that the pilot (the group's leader) is also under the influence, unable to think rationally. The plane (the ideology) is on autopilot flying in a large circle going nowhere. The passengers are just high on their specialness. They are unable to see their condition, their lack of understanding and therefore, their lack of progress. They keep coming back for more flying in the heavens. It just feels so good. But they are stuck. An ideology has them under its control. They believe and they follow. They cannot analyze their beliefs rationally. Their ideology controls for that and only permits belief in it. It rewards believers with feelings of grandeur, self-righteousness, artificial certainty and exalted self-esteem. (See

<http://karlwheeler.wordpress.com/2012/07/04/inspiration-addiction/> and
<http://www.psychologytoday.com/blog/the-human-beast/201211/are-religious-people-happier>)

Sacred silliness

The older we become without testing our core ideas, and the longer we have believed our faulty ideologies were correct, the harder they are to remove from our heads. Nevertheless, you can do that. Once you're aware of what is really going on, it's not hard to take control of your life. (See Chapter 26)

Many faulty ideas take on a life of their own, especially when the followers are infused with a sense of love for the beliefs and for each other as true believers in them. The most successful religions have all done this. They instill love of their own and pity or hatred for the others who do not believe exactly what they do. But the faulty ideas that come with this sense of belonging greatly limit the human potential of each individual in the group.

Those faulty ideas have long been labeled "Sacred: Do Not Touch," making it impossible for any mesmerized individual in the group to update and correct his or her understanding (worldview) of how reality is actually structured.

Religions have strange concepts of things *sacred*. There are sacred cows, sacred wine, sacred wafers, sacred books, sacred buildings, sacred flames, sacred prayers, sacred body postures, sacred tombs, sacred rivers, sacred names, sacred underwear and even a sacred old brick wall in the various religions worldwide. You may say that you respect others' beliefs, but you consider many of them silly or just plain wrong unless they are also considered sacred in *your* religious ideology.

Dead believers and more coming

A pile of thirty male bodies was found in Baghdad. All had their heads cut off. That ought to teach some group that they can't mess with another group's dominance! But then the other group retaliated immediately. "Thank God, for this battle between the two sides," said Iraqi Shiite leader Sheikh Ghazi Naji Gannas.

In Somalia, Sheikh Abubakar Hassan Malin told worshippers at his mosque to find and kill whoever offends the ideas of Islam's founder. They killed an elderly Catholic nun.

Religion combined with politics is the ideology that hooks many people. This limits our potential, and has caused many to kill others for having a different religious-political ideology. To cite just a few other examples, Pagan Romans killed Jews and Christians. Christians killed Pagans and Muslims. Nazis killed Jews. Muslims killed Christians and Jews and visa versa. Some Christians killed other Christians in the U.S. Civil war and in the two world wars in Europe. Atheistic communist guerrillas killed capitalistic Christians and capitalistic Christians killed atheistic communist fighters in Russia, China, Cuba, Vietnam, Korea, Bolivia, Columbia, Peru and Nicaragua. Muslims killed Hindus. Hindus killed Muslims. Irish Catholics killed Irish Protestants and Irish Protestants killed Irish Catholics. Sunnis killed Shiites and Shiites killed Sunnis. Sunnis killed rival Sunnis and Shiites killed rival Shiites.

There's no end to this, unless believers awaken from their hypnosis. Clearly, these ideologies have been and are very destructive of individuals, families, human happiness and human progress. They rob us of our potential to learn the truth and improve conditions for everyone. It's a system that pays only those in command and control of the paying believers.

Religious entrepreneurs vs. Reality

Life can only be lived optimally (genuinely spiritually) by untying our brain knots and straightening out all of our ideas and concepts that are in conflict with mountains of evidence to the contrary. Nowhere is this more necessary for our long-term survival than with our religions. We can replace religious ideology with the truth and proof so that we

can build a safe and sane future. Otherwise, it's a hijacked existence where we get locked into a religious belief system that requires us to fund it, follow it, adore it and defend it.

Top religious leaders fight against competing ideas that threaten their believers' loyalty. (See <http://news.yahoo.com/god-country-more-u-pastors-look-political-office-133107335.html>) They want to grow their enterprises. The more they make a name for themselves, the greater the political power and control they acquire. Like other top CEOs, some preachers in the U.S. seek riches. (See <http://www.washingtonpost.com/news/acts-of-faith/wp/2015/06/03/pastor-crefelo-dollar-might-get-his-65-million-private-jet-after-all/>)

"Divine right" is an old Christian doctrine that says Christian rulers have a "god-given right" to rule over the people. It says they are answerable only to god, and it prohibits rebellion against them. Combine this with free-market capitalism and you get mega-cults with exalted, wealthy preachers who are revered as prophets. (See: <https://www.cnsnews.com/news/article/lauretta-brown/georgetown-study-religion-worth-12-trillion-us-economy-more-google-and>)

Ideologies find a home in our heads and start remodeling

Viruses spread by growing in one body and jumping into others. They hijack cells. Their goal is simply to spread. There's not much to viruses. Their genetic code is simple. They can mutate rapidly because their existence is short and their reproduction is fast. Tiny, random mutations in their DNA can also make for big changes in how they spread. They could become more contagious and more deadly to us, or the opposite—each year. They don't "think," yet they spread and hijack more cells.

The spread of ideologies is easily compared to the spread of viruses. Ideologies can be seen as "thought viruses" spread by verbal contact. "People get strange ideas in their heads and then they pass them on," said a Mormon woman talking about people in other religions.

Virus-like ideologies hijack and control their hosts' brains. There are obvious functions of the infection: 1) spreading the ideology to others, 2) insulating each host from competing ideas, 3) keeping the hosts from knowing that their lives have been hijacked by making them feel good about themselves and their future, and 4) hosting a religious ideology even causes physical changes (remodeling) in the anterior cingulate cortex of our brains!

Religious ideologies also give their hosts friendships in organized groups with those who are infected with the same strain. The ideologies create like-mindedness between their hosts, which we, the hosts, then mistake for our self-identity. It just feels good to be in agreement with others, even if we suspect that we're wrong. Worse still, viral ideologies create enemies in the minds of the hosts. The enemy can even be their own family members who host *any* competing ideology. Loved ones get artificially divided against each other.

"Sacred murder"

Killing others for religion started millennia ago in the Middle East. It rages on there today. Islamists have spread killing for religion around the world (USA, Kenya, Mali, Nigeria, Argentina, Britain, Holland, Malaysia, Indonesia, Bali).

Religious ideas can even be so potent that believers go to their deaths in dedication to the ideology. The Incas often did this willingly. Incas let priests sacrifice them on alters. In the Bible story, Abram even tried to blood-sacrifice his son Isaac to an invisible god by slitting his throat on an alter. In fact, human blood sacrifice used to be a very common ritual in religions. It was often the centerpiece of them. Murder, as an offering to a god, was common in ancient cultures across the Middle East and in the Inca-Mayan-Aztec Americas. Even Jesus was figuratively called "the sacrificial lamb of god" to entice blood-sacrifice pagans into the new Christian religion. Still to this day in many churches worldwide, devout believers symbolically drink Jesus' blood and eat his body as a sacrificial ritual called *the sacrament* or *Eucharist*.

Today Islamic jihadists explode shrapnel bombs killing themselves and as many of their innocent, cultural enemies as possible in a group blood spill. Islamists have even slit the throats of kidnapped non-Muslims, "infidels," and displayed their hands, dripping with blood, to a video camera in great religious pride. Even the moderates have only voiced an occasional objection to this. After all, their viral scriptures tell them that their god approves of eliminating infidels, especially if they die into martyrdom's glorious reward in an afterlife for defending the faith, the thought virus. Who are they to go against their faith?

When suicide bombings began, millions wondered how anyone could kill himself or herself and innocents in the name of religion. They wondered how religious leaders could allow or not even speak against such acts in the name of their god. Few understood the controlling power of ideology over the followers and leaders infected with it.

When we are aware of how such contagious ideologies work, we have begun to immunize ourselves against them, making us and the world a bit safer.

Hidden, hypnotic commands

Those with a religious ideology have scriptures (like computer commands) stored in their brains. One verse or more may command the believer to vigorously, sometimes violently, defend or advance their faith against all foreign and competing ideas, even against facts and hard evidence. Knowledge of their religion is all anyone needs to know, in their view.

Rahma Rifaat cautiously stated, "There is a prevalent cultural environment that promotes fundamentalist thought and reaction... This is fertile intellectual ground for the generation of terrorists." (Al-Ahram Weekly, 5 May 2005)

George W. Bush's speech writer had a different explanation. In 2006, he wrote, "When a country or region is filled with despair and resentment and vulnerable to violent and aggressive ideologies, the threat passes easily across oceans and borders and can threaten the security of any peaceful country."

This model of despair and resentment as the cause of aggressive ideologies is not accurate. The explanation doesn't explain the motivation of the instigators and leaders of the Islamists he was talking about.

Usama Bin Laden was a multi-millionaire turned mass murderer. Bin Laden never grew up suffering from poverty, despair or resentment. He created a following with some suffering from poverty, despair and resentment. But others under him were also well off—a medical doctor and college-trained engineers. Bin Laden simply insisted that his religious ideology and its severe laws would create a godly Utopia. But the severe, Islamist, Taliban government that sheltered him in Afghanistan created the opposite, a dystopia.

All radical fundamentalists are simply protecting and promoting their ideologies as prescribed. The leaders' reward is increased power for leading the effort. Worse yet, in Islamist countries a religious leader can order the assassination of someone who offends his personal, religious sensibilities. The faithful can then hunt down and murder the religious offender. This leads to a culture becoming more and more conservative. Then the fear of appearing different or threatening keeps every one tightly controlled and highly limited.

In America, many Christian fundamentalists protest the teaching of biological evolution in schools. The truth about nature cancels their biblical creation story. They relabeled their story as *intelligent design creationism* and want it publicly promoted. (See <http://www.thedailybeast.com/articles/2015/07/19/creationists-take-down-another-top-professor.html>) and <http://www.thedailybeast.com/articles/2015/12/28/creationism-whistleblower-academic-freedom-is-sneak-attack-on-evolution.html> Pay wall.)

Mormons operate religious training centers for their high school and college students near public schools. Catholics have their centers near many state universities. This helps to keep their youth from weakening in their religious worldview and leaving the religion while attending secular schools. Seventh-day Adventists have their own K-12 schools and colleges. Evangelical churches operate Bible colleges. Indoctrination equals member retention.

“Every social engineer knows that you can change an entire culture in one generation if you can get to the kids,” says Becki, Christian homeschooler and mother of three.

The most *efficient* method for maintaining and growing the ideology is always prolific breeding and constantly indoctrinating the children. A strong religion deeply programs those born into it. Kids brought up in a strong religion generally do not leave it. As adults, they tend to raise their children in it. The multiplication factor grows more and more programmable hosts for the ideology. Many more devout believers equal more donors.

Assimilators are everywhere

All growing religions indoctrinate their members with the idea of growing the group of believers. Why? Because of natural attrition. Members continuously grow old and die, so survival for the religion means a constant supply of new believers. An excess means growth.

If you show an interest in their religion (no immunization), the believers will immediately indoctrinate you into their religion. You will find yourself not questioning, but believing what they believe. You will give them money and even your children to indoctrinate, as they promote you to a minor, unpaid leader. Soon you will likely see those in different ideologies as the enemy, or at least misguided and wrong. Your worldview will change to theirs. It feels so good to be one with the group. You have been assimilated by the previously assimilated.

Jehovah’s Witnesses knock on the doors of Catholics, Mormons, Seventh-day Adventists, Evangelicals and Jews to try to convert them to their ideology, to join their group. They never stop, despite the poor receptions they get. Then 19- to 21-year old Mormon missionaries knock on the same doors trying to convert the same people to *their* group. Independent preachers, Seventh-day Adventists and Evangelicals operate radio and television shows trying to convert the same people behind those doors. Many sects now use websites to try to match their religious competitors outreach to new customer-believers. But recruiting results are very poor. Why? Because almost everyone is already immunized against them in another religion (or are immune to all religions).

Changes within large religions are only rarely handed down from the leaders. The religious leaders often ascend to the top position by seniority. A conservative, old leader doesn't want to introduce anything that might fail and weaken the group, so he largely sticks with what has always been done. Hence, very little changes in these groups over the years. Even their clothes, hairstyles, and manner of speaking and acting around one another can be from the era their group started, like some Mormons, Muslims, Amish and Hasidim.

Ultimately, low recruiting success doesn't much matter. All the sects have to do is recruit an occasional, young outsider who will marry within their group and make children who will grow up in the group. More children are certainly better than one for the expansion of the ideology, so large families are encouraged. (See <http://www.bbc.com/news/magazine-35978328>) The group of believers could continue to grow with just the fertile people already in the group, but inbreeding becomes a problem. To keep the base of believers healthy into future generations, outsiders’ genes must be introduced. Their scriptures tell them to recruit others, but the real reason is to acquire out-group genes despite the high expense and their low success rate. (See <http://www.phoenixnewtimes.com/news/forbidden-fruit-6438448>)

Learning to believe the irrational

You know how easy it is to get a small child to *believe* that an overweight old man with a white beard dressed in a large red and white suit flies through the air on a snow sled on the night of December 24th each year, being pulled by levitating reindeer. He lands on every rooftop worldwide, managing to squeeze down narrow chimneys with a giant toy bag. He then levitates back up, having enough time to travel to every home in the world before sunrise. He carries enough presents for two billion children in his snow sled, even to homes with no chimneys in the tropics where it's hot and humid on December 24th.

Supernatural explanations

And then there was a guy who called and said he could pray them away.

—Hugh Willoughby, International Hurricane Center, Florida

After Hurricane Katrina caused so much loss of life and destroyed much of New Orleans, one religious group had a theological explanation for it. "God attacked America and the prayers of the oppressed were answered...The wrath of the All-mighty fell upon the nation of oppressors. Their dead are in the thousands and their losses are in the billions," said a statement posted on an Islamic website used by al Qaeda in Iraq.

Speaking about the same hurricane, John Jones of The Salvation Army in Louisiana said, "Natural disaster is caused by the sin in the world."

Both Jones and the al Qaeda theologian had answers from their ideology. But very warm ocean waters generate hurricanes, which has nothing to do with sin or a god that goes on a killing spree using hurricanes. (Also see https://www.huffingtonpost.com/entry/pat-robertson-hurricane-florence_us_5b972c04e4b0cf7b0042d9c7)

Believing in Our Lady of Road Salt

The Kennedy Expressway in Chicago is a raised highway with many concrete underpasses. Road crews spread salt on the expressway during the winter months. Salt melts the snow and ice so that cars and trucks have traction on the road's surface. The saltwater runs down drains onto the flat concrete supports in the underpasses. By April, dry stains appear on the supports.

In April 2005, a stain the height and shape of a woman formed on the face of one of the expressway's concrete supports. It looked like a blurry, Virgin of Guadalupe or Virgin Mary icon. People noticed it and told others about it. Many highly religious Mexican immigrants started praying to the salt stain virgin. They left lit candles and flowers. As the word spread, more and more people came to see it and built a shrine. Mothers showed their children how to pray to the image. Highway department workers washed the stain off the concrete, ending the religious experience for hundreds of the faithful. (See <https://chicago.cbslocal.com/2013/05/03/play-recalls-story-of-our-lady-of-the-underpass/> and <http://wordspy.com/index.php?word=pareidolia>)

Faith causes people to suspend their use of logic and reason, but only in regard to their own ideology. Most people can see through other people's ideology fairly rationally, shaking their heads at others' faith-based absurdities.

Believing gravity can be turned off for religious celebrities

Gravity cannot be turned off. It's always ON.

Mohamed is said to have levitated to heaven on a horse in defiance of gravity. Moses is said to have levitated part of the Red Sea in defiance of gravity. Jesus is said to have walked on water and levitated to heaven in defiance of gravity. The Ancient Assyrians and Egyptians had gods with white feathered wings for flying without flapping vigorously. The later Christian angels did also. But oops! It was a flawed aeronautical design, with wings too small for the load, and they lacked feathered tails for stable flight. Later it became popular to depict religious celebrities riding a wingless horse in the sky.

It's easy to logically reject the supernatural stories of other people's religions. Theirs are not the stories that we consider sacred, precious and real. But if someone tries to point out the wild and silly fictions of *our* religion, we feel threatened, insulted and go on the offensive. The harder part is to realize that our own supernatural stories are also fiction, even though we were taught from childhood that they were absolutely real, precious and

sacred, even incontestable. “The compulsion to believe in something we need and want to be true, rather than see reality for what it is, can at times be astounding,” said Gary Younge.

Believing in evil

Religious people say that they need to fight and beat omnipresent evil with their version of god worship and prayer or we're lost. They often view those in other religions as evil. But evil is simply the *actions* of people who have become nasty, vindictive, tortuous, power-seeking and greedy. Some were born with a temperament that led them this direction. Others acquired the temperament. People wronged them and they multiplied the penalty they felt they were owed. Since they can never experience a sense of final payback, they just keep going until they are arrested or die. They have no moral compass. They don't feel for their victims. Some even rise to be manipulative leaders of companies, nations or religious groups. The worst are psychopaths or sociopaths.

Hitler was such a person. He said, “The great mass of people will more easily fall victim to a big lie than to a small one.” Leaders (including Hitler) often convince their followers to believe in them and to go out and do tremendous harm to others. Stalin was such a person. Charles Manson, Reverend Jim Jones and Usama Bin Laden were also.

Evil can also be dangerous *group behavior*. Pit bull terriers can be wonderful pets, but let them run free together in a pack and they have been known to attack, kill and eat humans. The wonderful pets suddenly become what we have to call *evil*. The group effect often cancels individual restraints.

Hitler *excited* people into a state of group evil. Usama bin Laden *coaxed* his. Even the early Christians in Egypt occasionally behaved as packs of killers eliminating anyone who opposed them. In the year 415 in Alexandria, Egypt, Christians attacked the scholar and mathematician, Hypatia. They stripped her naked and dragged her to a church where she was slowly killed by scraping her flesh from her bones. What was her crime? She was outspoken against a powerful religious leader. She had been preventing the local bishop from gaining governmental power.

The murders during the Inquisition by the Catholics are other examples of religious pack mentality.

Believers have done supreme evil in the name of their religion to put down what they thought was evil just because it was different. Islamists do this today. But evil is just thoughts and then behaviors that injure others. Evil does not come from a supernatural sadist named Satan, Lucifer or Beelzebub who manipulates people telepathically. Supreme evil is done in the name of identity: “We are chosen, special and superior. You are not one of us.” Religious hatred and murders result. Murders escalate into wars. The side with the most powerful weapons kills the most “others.” Nuclear weapons are the ultimate weapons.

Proud to be a pessimist?

There's a different, personal approach one can take to live without fear and without believing in a supernatural afterlife. Living optimally today is plenty and is its own reward *if* you are an all-out optimist.

Even when everything is *going to hell in a hand basket*, big chaos equals big opportunity, so an optimist finds what potential good can result. An optimist finds the real benefits for self and for others. Attitude is everything. Optimists not only live happier lives, but they also make beneficial things happen that directly and indirectly help other people live better lives.

Pessimists, obsessing on negativity do neither. They get depressed and toxic, which hurts others. All-out pessimists feel that if they can't be happy, you have no right to be happy either. Self-imposed misery demands company, usually lots of it. Instead, one can just *decide* to be an optimist for all the benefits. (See <http://www.mayoclinic.com/health/positive-thinking/SR00009>)

Gratitude beats greed. Kindness beats hostility. Optimism beats pessimism. These combine into happiness, which beats depression. There are three factors responsible for having happiness in one's life. 1) genetic predisposition to being happy, 2) learned disposition for being happy, and 3) one's life circumstances. Clearly, anyone can enhance the last two. Hence, happiness is largely a controllable state for each of us.

Contrary to popular belief, having tons of money is not the cure for unhappiness. (See <http://www.ncbi.nlm.nih.gov/pubmed/690806>) Some people don't become happy until they give away their wealth. (Both Jesus and Buddha recommended it.) But having just *enough* money *is* a factor in happiness. Not too little or too much. Having too little makes one a slave, as does having too much. Poverty owns the poor. Wealth owns the wealthy. Both cause constant worrying. (See <http://www.bbc.com/capital/story/20150515-poor-poor-billionaires>)

Feeling threatened by new discoveries

For devout believers, the discoveries of science don't reinforce their older, fixed worldview. They automatically reject threatening facts and concepts. Their brains have been *firewalled* against the truth, how things really are in nature.

In 1683 Antoni van Leeuwenhoek, discovered very tiny lifeforms called *bacteria*, 93 years after the invention of the microscope. Eighty-five years went by. In 1768 Lazzaro Spallanzani found bacteria living in the air and in water, and that they could be killed by heat, fire or in boiling water. Ninety-seven years went by. In 1865, Louis Pasteur in France looked through a microscope at a world of tiny creatures. He was developing the new science of microbiology to aid the beer and wine industries. Companies hired him to solve their spoilage problems. He found that bad batches of beer and wine were caused by the growth of very tiny bacteria in the liquids instead of the necessary, very tiny yeast organisms that produce alcohol. No one had been able to see these before. This was radical information about a new level of very tiny living things that raised even more questions. (Alcohol killed bacteria! Alcohol burned as a clear, watery liquid!)

At the time Pasteur lived, about half of those who underwent major surgery died of subsequent infections, particularly those wounded in battle. Gangrene set in and the wound putrefied. Sepsis, the spread of bacteria in the blood, overwhelmed the body's immune system and the patients died or had to have their highly infected limbs cut off to try to save their lives. But nobody understood that bacteria caused gangrene, *yet*.

One year later, English medical doctor Joseph Lister picked up on Pasteur's beer and wine discoveries. Dr. Lister spent a lot of time looking through microscopes at samples taken from infected wounds and announced that tiny living creatures (bacteria)— too small to see with the naked eye—were responsible for the deaths of those who had undergone surgery. These microbes came from the unwashed hands of the surgeons and from the surfaces of objects, like unclean surgical instruments, he announced. Other doctors didn't want to believe it. Theologians were outraged. The resistance to this new idea was strongest in protestant Britain and the puritanical United States. This certainly didn't fit with people's religious model of reality in which only an unseen, father god determined if people got sick and when they died.

In that era, people reasoned theologically. Since man was made in god's own image, if man couldn't see it, then god couldn't see it. And if the creator couldn't see something, it obviously didn't exist. Therefore, there were no tiny creatures eating the flesh of an open wound and multiplying rapidly! Microbiology was considered blasphemy against god. Punishment was common.

In 1847, Dr. Ignaz Semmelweiss, a Hungarian surgeon began washing his hands before operating on his patients. This reduced his patients' death rate from 12 out of 100 to two out of 100. When Dr. Semmelweiss urged his fellow doctors to wash their hands thoroughly before operating. They were outraged. They were insulted that anyone would imply that they were ignorant and would promote such a non-traditional, heretical idea. They had Dr. Semmelweiss committed to an insane asylum.

Later more people looked through microscopes at bacteria taken from open wounds, rotting meat and spoiled beer. It was always the same. Microbes called bacteria were eating, multiplying rapidly, dying and decaying. The theological argument eventually became ridiculous, but some ultra-conservatives still denied that bacteria existed and demanded a return to the old view of life and death. The truth eventually won out. *Bacteria* eventually became a commonly used word. Just using the word brought about a revolution in understanding about how things really are in nature.

“Cultural evolution has always been a process of perceptions muddling their way toward reality,” said Michael Ferguson.

A publication in 1929 first reported that Alexander Fleming accidentally discovered the bacteria-killing power of a greenish mold. From this he developed *penicillin*, the first antibiotic that stopped bacterial infections in the body, a major cause of early death.

Nukes

In World War II, Japanese soldiers sacrificed their lives in suicidal *bonsai* charges and as kamikaze pilots. They did it for their religion called *Shinto*. They considered their emperor a god and his wishes their duty. Nationalism, patriotism and their religion had become one. The emperor’s commands, via his generals and admirals to his military, were worth dying for. Religion and military service were one.

But then something catastrophic happened. Two Japanese cities were vaporized. This had major effects worldwide. A new word and scientific concept started to catch on the day after the bomb devastated Hiroshima, Japan: *nuclear*. It brought with it the concept of releasing the immense energy in the *nucleus* of the tiny particles of matter called atoms. This word, and the radically new concept it brought, spread worldwide quickly. It wasn’t abstract or an uncertain concept to be doubted, but an instantly proven aspect of nature. Nuclear bombs became possible only because an equation by Albert Einstein revealed the high-energy content of matter, especially that of high-mass, radioactive metals: $E=Mc^2$ (Energy = Mass times the Speed of Light multiplied by itself).

After the explosions, the believers in Japanese Shinto religion were suddenly shocked right out of their religion. The emperor and his military were suddenly powerless against their enemy. A powerless leader is no god to anyone. The faith, the powerful ideology, collapsed. It survives only as a cultural artifact in Japan today. It is no longer a virulent ideology motivating armies or suicide warriors.

There is a peace shrine dome in Hiroshima, Japan that tells visitors the story of the day the bomb was detonated 1,800 feet in the air over the city, producing a 7,000 degree (F) wave of heat that instantly spread to a radius of three miles. People on the sidewalks, who were shielded by a concrete building from the intense light and heat of the bomb, saw those who were not in a shielded position ignite. Their clothes, hair and flesh instantly burst into flame. Despite the air raid sirens, the size of the explosion and the effect was a dumbfounding surprise. There was no quick or obvious explanation for it. It was a moment unlike any other that anyone had ever seen or heard. It was the most radical event in human history. Then a second bombing followed three days later over the city of Nagasaki with the same fiery results. The emperor surrendered. This was the scale of shock to believers that could end a powerful ideology.

Using nuclear bombs today would bring nuclear retaliation—more nukes.

Perspective

What could you have done if you were a Japanese citizen just before World War II? Could you have seen everyone else being deluded by a dangerous ideology of leader worship and the country headed for mass death and defeat? The peer pressure to think like everyone else was tremendous.

There is only one way to gain any perspective when one is in the middle of an

ideology. It's to be a solid skeptic. Skeptics question assumptions. They aren't negative. They are skeptical out of positive motivation. They require testing of the assumptions to save lives and advance genuine knowledge, eliminating the false and dangerous. However, if those around you will want to kill you or imprison you for being skeptical of the false assumptions that drive their ideology, it's time to leave that culture for a safe haven. Some Japanese families migrated to the United States before World War II. Many Jews escaped Germany as Hitler rose to power. They took early action to survive and thrive elsewhere, even changing their religion to Lutheran or Catholic.

Ideologies are malware and our brains are the computers

Programs run in your head, and everyone else's. But now you can be free to choose *which* program runs in your head. If you are aware that religious and political ideologies have been running in you, consciously and subconsciously, you can *uninstall* them from your brain.

Supernatural belief is the first thing to get rid of because there's no such thing as magic, the manipulation or suspension of nature's laws at will. All the other, attached misconceptions will go away with it. You get to see the way things really are in nature.

The second thing to *uninstall* is political affiliation. Then one can see the way things (money, privileges, power) get manipulated to benefit a few instead of benefiting most everyone. Such a lopsided system of government and finance, benefiting an elite few, is not pragmatic or optimal. Besides, rational people don't want to be billionaires, spending much of their life managing and guarding extreme wealth and power. It's better not to be infamous and trapped. When one also uninstalls political affiliation, one's life gets clearer.

The blinding power of passion over reason

Being ruled by one's acquired passions for religion and/or politics only serves those who use religious passions and political passions to get our loyalty, money and votes. These passions are just bad programs in our brains. They take away our freedom and our ability to see what's really going on behind the ruse. Using reason as our default approach to everything instead of acquired passions gives a person true freedom. When we are free to reason, we can see clearly. The world looks a whole lot different and richer to a person who escapes into reality and clear, passion-free reasoning.

Free-market economics and you as a religious consumer ("Buy baby, BUY!")

Really? Is religion commercial and rooted in economics? (See https://en.wikipedia.org/wiki/Theory_of_religious_economy) How could a new religious enterprise break into the market? How would it be able to get member-believers-donors? (See https://www.buzzfeed.com/nitashatiku/c3-silicon-valley-church?utm_term=.quvVwRKZrJ#.irkvKqrBbR)

"So what are the good programs to run instead?" asked Brian

You can program yourself to always think rationally and logically. That's the kernel on which the rest and the best ride. Then you can program yourself with a love of knowing everything possible in life, of achieving your potential and helping others do the same. You program *yourself* instead of being programmed by others who are infected with irrational and illogical, dangerous programs (malware). You get to make good choices freely and constantly *self-correct* instead of just thinking and reacting as a collective of believers in a self-sacred, group ideology. You can be of needed service to others without the excuse of doing it for a reward in the sky after death. Optimal living for us all is the ultimate endeavor. The opposite is master and slaves, the game of psychopaths and sociopaths.

4. It's a Guy Thing

*We'll fight them 'til Hell freezes over,
and then we'll fight them on ice.*

—Shelby Foote

Not one of us!

Many team sports are a testosterone-driven game of violent contact, domination and endurance. These are necessary to score more points than the other team, to win, to advance in the league and win championship glory. The managers of sports teams dominate their players and shout commands.

Top religious leaders have team players also. They have assistants and their congregation. Sometimes their sermons contain shouting delivered at a fast pace to establish their dominance. The preachers' endurance is unrelenting repetition, bold, powerful conviction and resolute self-certainty. Their skill is in micromanaging the religious ideas of their audience so that their opponents can't steal their followers. They use selected quotes from the *Bible* or other sacred texts that add impact and seemingly traditional authority to their message. This motivates the people to think and act as a group. It makes for a strong, single-minded team, ready to defend against any competition.

Like right-wing political talk show hosts, the religious leaders' tactic is to label all idea competitors as "not one of us." The believer-followers then become suspicious of, or even hostile toward, those not in their group.

Pat Robertson's religion-based television show has had many viewers. He advocated placing plaques of the biblical Ten Commandments in government buildings. He advocated that America should be a Christian nation, so that the god of the *Bible* can be the worthy nation's invisible guardian and benefactor.

One of the biblical commandments prohibits killing people. In August 2005, on his television program, The 700 Club, Robertson called for the assassination of former Venezuelan President Hugo Chavez. Chavez had become a friend of communist Cuba, a socialist, and therefore *not one of us* in the Christian-capitalist Americas.

Ours, not yours!

Zeus, the Greeks' god of the gods, became *Deus* in the Latin spoken by the Romans. *Nobiscum Deus* ("God With Us" in Latin) was a battle cry of the army, the Roman legions. Centuries later, the metal buttons and belt buckles of Nazi soldiers read *Gott Mit Uns*, ("God With Us," in German). They marched onward as Christian soldiers killing groups of people that they considered to be *not one of us*.

Only us! When American foreign policy is coached by Evangelical preachers

"That won't ever happen here!" said Eric from Michigan. But it is happening. (See <https://www.axios.com/trump-kushner-middle-east-peace-plan-evangelicals-5337c4f7-0f91-489c-baad-7799f63baed7.html>)



Nazi uniform button - Wikimedia

Adolph Hitler played to the bigotry of the German people and fanned its flames. Under Hitler, far-right nationalism became religious hatred of the Jews. This justified the mass murders of Jews and others considered inferior as the Nazi-Fascist ideology became fused with German super patriotism.

Christian fundamentalists are a dominant political force in the U.S. with election-tipping political power. Many want their religion to be the official, patriotic religion, so that they can feel that they have achieved *god with us*.

Radical Islam also wants political power. Usama bin Laden said that he wanted Saudi Arabia relieved of its Saud family king. A zealous imam in England said that he intended to make Britain an Islamic nation. Radical Islamists are convinced that god is with them and wants them to conquer all nations.

Christian religious leaders often obtain wealth and tremendous power using religion. But wealth and power are not what motivates the followers. The leaders manipulate the followers using the ideology which the followers already have in common. As long as they don't violate the basic tenets of the ideology, becoming "not one of us," leaders can tax and steer the believers for gain. If they get caught breaking their own rules, believers will leave.

Population for religion

Islamic leaders and other dominant, prosperous males can have up to four wives at one time with whom to breed in an Islamic theocracy. This can create up to four times the number of offspring compared to Christian males who can have only one legal breeding partner at a time. Hence, Muslim populations may overrun Christian and non-religious populations in Britain and Europe unless deadly conflicts (or self-enlightenment) change the multiplication factor.

Even Russia now has more Muslim births than non-Muslim births. Demographers predict that by 2030 Muslims will be the majority in Russia. Russia also has a very large stockpile of nuclear weapons.

Biology is about which individuals survive and out-breed competitors. The Abramic religions are ideologies that promote large families so as to competitively attempt to out-breed those who carry different ideologies. (See <http://www.bbc.co.uk/news/magazine-22526252> and <https://en.wikipedia.org/wiki/Quiverfull>)

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Note: The Abramic religions are the three religions descended from the story of Abram (Abraham) in the Bible, Judaism, Christianity and Islam. Abram was a farmer and goat herder from Ur in ancient *Sumer* (Iraq today) who migrated and bought land in Canaan (Palestine today). Abram was the old, biblical character who changed his name to Abraham.

To use the standard term "Abrahamic religions" disconnects Abram from his past and his worship of many gods. Labeling the three religions "Abramic" shows their direct line of descent from the blood sacrifice religion of his culture in Ur. The Bible story (Genesis 22:10) says he even tried to sacrifice his son Isaac to a god on an altar he built to sacrifice animals or humans. (See http://www.nytimes.com/2009/10/27/science/27ur.html?_r=0)

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Why was the Mormon religion such a fast growing sect? The religion encouraged its devout members to marry other members while young and have large, devout families who grow up to do the same.

In the evangelical churches, fertile members may end up having offspring from two or more spouses via divorce or an extramarital affair. Divorces are often caused by infidelity, but religion-based serial monogamy leaves divorcees available again to make more offspring in the same religion with new partners.

The religious group's members yield to the religious leaders. The religious leaders impose strict rules against nakedness and sexual activity during courtship, but highly encourage sex in marriage. All growing religions encourage married couples to have large families. The result is that there will be a larger, loyal group to expand the religion from the inside out. The more it grows, the more new leaders can build new congregations as satellites of the core ideology. The ideology goes viral when the children get taught the religion.

Because of strict sexual laws and group-instilled guilt about sex, it is very rare that members of any strict religious group find a natural comfort in nakedness. (See <http://gotopless.org/news.php?extend.155.2>) Rarely does anyone live *au natural*.

A new pastor moved into the small town and went out on a warm, sunny Saturday in spring to meet and visit with the various members of the congregation at their rural homes. All was going well until he came to one cottage. All the windows were open and clothes were lying on the stone walkway beside the house. It was obvious that someone was home, but no one answered even after he knocked several times and yelled 'Hello?'

Finally, he took out his card, wrote on the back 'Read Revelations 3:20,' pinned it to the door and left.

The next day after church he was counting the offering. He was startled to find his card in the bottom of the collection plate. Below his scriptural reference was written another: 'Read Genesis 3:10.'

Revelations 3:20: 'Behold, I stand at the door and knock. If any man hear my voice, and opens the door, I will come in to him and will dine with him...'

Genesis 3:10: 'And he said, I heard thy voice in the garden, and I was afraid because I was naked.'

Today's hottest Christian issues are about sex, including the banning of homosexual marriage, banning abortion, banning stem cell research, and promoting teenage sexual abstinence. No teaching about birth control methods is wanted. Why? That would hurt the churches' population growth rates and they consider all fetuses to belong to their god.

Polygamy was once the norm. Having more than one wife at a time was common in early Christianity. Only Bishops were to be limited to one wife. (See 1 Timothy 3:2)

To aid the continuation and the expansion of the religious group via breeding, many churches hold singles' meetings for their unmarried members to connect. The most virulent

religious groups also try to block threats that might interfere with *their* breeding and expansion, like allowing marriage with a breeding partner of a different religious group who won't convert. These are portrayed as sexual morality issues, but the underlying motive is just mechanical: the focused production of new believers.

One can also consider that pedophile priests are a inevitable outgrowth of male priests being prohibited from sex with women, and of faithful, naive and unquestioning parents providing the constant supply of young, unsuspecting alter boys.

Abstinence, sexual confessions & punishments

Evangelical groups have pressed hard to have sexual abstinence taught in public high schools in the United States instead of teaching about forms of birth control. The message is strict: No sex! This has some basic survival value in the era of AIDS, but consider that having less sexually active fertile people in the general population will increase the actively breeding religious groups' ratio in the overall population. The ideology gains hosts.

The Catholic population is huge and loyal. Male priests hear confessions and prescribe the cost of forgiveness in money and prayers to continue to receive the sacraments of the church and a place in the afterlife. In this ideology, to die outside the fellowship of the church, puts one's afterlife in jeopardy.

In Mormonism, qualifying to enter the special temples involves an all-male chain of command that interviews members for worthiness. Questions are asked about sex (See https://www.reddit.com/r/exmormon/comments/4zaouj/questions_my_bishop_asked_me_a_the_n15yearold_girl/) and about giving a full 10% of one's gross income to the organization.

Unabiding members and those excommunicated face a prophesied afterlife that is lessened from "celestial" to "telestial" or down to "terrestrial," farther from the solar glow of god. Membership is scrutinized. Resigning involves processing by the church's law firm!

In Islamic republics, premarital sex or adulterous sex by a female can result in her execution in public by stoning. Male rapists face no consequences. Females are prey.

In old, Christian Europe, illegitimate children became second-class citizens, called *bastards*. (René Descartes was one.) The fathers were embarrassed to claim them as their own. Some were even fathered by priests.

In the early United States, Puritans imposed religious law and punished adulterers of both genders by locking them in a stock or pillory in the town square, on display. The guilty could be abused by passersby, who often delighted in this rare experience of dominance over someone. This method served both to punish the adulterers and to dissuade passersby from their own promiscuous sexual activity. This may have slowed both the birthrate of bastard children and the spread of venereal diseases. It certainly maintained the control of the male, religious leaders and lawmakers, while it was rarely enforced on them. Many may have become leaders just to have sex with whomever they pleased. (See https://en.wikipedia.org/wiki/List_of_Joseph_Smith%27s_wives)

The father's kingdom

In America, evangelical church leadership is often a simple patriarchy handed down from father to son, or, in the case of the Mormonism, a geriatric, semi-oligarchy spanning many generations with church leaders often chosen from the descendants of the church's previous or original leaders' gene pool.

During the George W. Bush administration, evangelical leaders pressed for special tax exemptions, indirect government funding, and for what they didn't want taught in public schools that competed with their religion and threatened their lucrative careers. But their leadership game was and is simply biological. Their offspring will continue to have prestige inside the religion, and therefore access to choice breeding partners. They are doing, artificially, what evolution selected our genes and bodies to do: specialize in the short-term interest of ourselves, our offspring, and their offspring. For the regular followers, the pool of

breeding partners is not as elite. They have virtually no chance of rising to top leadership in big-capital and big-cash-flow, incorporated church organizations.

The father & the son

American preachers often turn over the family religious enterprise to their sons. The benefits are numerous for the sons. It's a ready-made income source and prestige niche. This parallels the supernatural hierarchy of their religion, which is also based on two males—The Father and The Son.

Robert Schuller's career was leading Crystal Cathedral Ministries in Los Angeles. The enterprise claimed a local congregation of more than 10,000 members. Schuller's internationally televised sermons were called "Hour of Power." He designated his son Robert to be his successor.

The Radio Church of God became The Worldwide Church of God reaching tens of thousands of listeners nightly. Its founder was a radio preacher named Herbert W. Armstrong. He appointed his son, Garner Ted Armstrong as his successor. The church enterprise, founded by the elder Armstrong, came to an end after his son was photographed on a church-paid trip to Las Vegas in the company of female escorts dressed as non-breeding sex partners for hire.

Korean-born Reverend Moon's Unification Church named his U.S.-born son, the Rev. Hyung-jin Moon, its top religious director in April 2008, long before his father's death in September 2012.

The most famous American cleric, Billy Graham, gave his incorporated ministry to his son Franklin, not to his daughter Anne.

With the death of the Reverend Jerry Falwell in 2007, it was announced that his two religious institutions would each be run by his two sons.

Without going to a seminary to study theology, and with only one year of college education, Joel Osteen inherited a large congregation (Lakewood Church in Houston, Texas) from his father in 1999.

Accountant and polygamist Warren Jeffs acquired The Fundamentalist Church of Jesus Christ of Latter-day Saints from his polygamist dad, Rulon Jeffs.

Richard Roberts replaced his retiring father as president of religion-based Oral Roberts University in Tulsa, Oklahoma.

We couldn't find any mother-daughter religion enterprises *anywhere*.

Male-against-male religious violence

Religious wars are between males. Males created the religions. They may protect their religion by killing other males to try to terminate the competition.

Female suicide bombers are a new occurrence and still rare. Women almost never kill males or other females to protect religion, even though women are often the most devout practitioners of religion. In tribal wars, women usually survived to procreate via a strategy of surrender. The victorious males took the defeated males' fertile women with whom they could create even more semi-copies of themselves to carry their ideology forward. This is largely how the various ethnicities were generated, and later mixed. Women never formed armies and fought for their religious ideologies or for any female god. If they had, female worshippers of the ancient Egyptian goddess Isis might still be with us today.

The top male exempts himself from the rules

In the early decades of communist China, the male leader was both feared and revered. Millions carried his book around and quoted from it to others. It was a Communist gospel. The society was collectivized. Sex was highly controlled. A Chinese man could only have one wife. The couple could have only one child. But the leader, the book's author, the

chairman of the Chinese Communist Party, Mao Zedong, reportedly mated with different, fertile peasant girls for decades. It was considered an honor for the girls to be chosen and brought to him. Mao's children may number in the hundreds or more.

This mating behavior was a tradition for the leaders in the earlier imperial dynasties of China. Like Arab sultans, the ancient Chinese emperors had many concubines in "The Forbidden City", a large area and group of buildings now preserved as a tourist site beside Tiananmen Square in Beijing, China.

A better game

There is a better game than religion or communist ideology. It's not dogmatic. It's not zealous. It doesn't make kings or clergy. It doesn't kill people. It doesn't want your money for a god ideology or for its leader and his family or for an economic theory (Karl Marx's or Ayn Rand's). The better game is science, clearly the most beneficial endeavor we have ever invented. (Ask anyone who has had a life-saving, high-tech medical procedure.) But there are two sciences in particular that merit our interest. The science of *cosmology* is the study of things going on in space. The science of *genetics* is the study of DNA, the chemical code for the biological construction and maintenance of each lifeform on Earth. Understanding the basics of cosmology and genetics is the shortest way out of the old ideology. Seeing the big picture they present is profoundly wonderful.

Limited field of vision

The new words and new concepts from cosmology and genetics bring us the greatest insights there are. The old words and old concepts from religious scriptures are not accurate in describing the way things really are in nature. But the inaccurate words and concepts are still in heavy use with religious people. Even worse, children are still being programmed with them in religious families worldwide. This is an injustice to the new generation. Religion-raised children are starting out far behind children who are raised understanding the sciences.

Parents in fundamentalist religions take the stories, laws and customs of their religion as the truth and as all anyone needs to know. Contrary information is threatening so it's blocked. Their children get deprived of real understanding.

"Every person takes the limits of their own field of vision for the limits of the world," said Arthur Schopenhauer. Beyond those limits is real understanding.

The F-word, teen gangsters and perpetual poverty

For seven years we had the honor to teach (as outside contractors) a class in human potential development disguised as a class in public speaking to "at risk" high school students. They got to read science news articles aloud. They spoke about the significance and argued with those of different opinions. They even evaluated each other's development of ideas and overall presentation skills.

Some of the students were so language-limited, that they were unable to communicate their actual feelings and perceptions. Instead they used the F-word (*fuck*) two or three times in every sentence in conversation. They used it like male gorillas beat their chests to attract attention, to issue a warning, or to establish dominance over the group. They used it as a filler word when trying to tell a story or give a description. They used it as a verb, a noun, an adjective, an adverb, a gerund and as an exclamation of pain or joy. They used it as a dismissive exclamation. All this required the listeners to translate the speakers' tone, body language and facial expressions, to try to determine what they were trying to say. They obviously didn't literally mean *copulation*. The more times they used the F-word in each sentence, the harder it became to understand their overall story, because the F-word can mean just about anything. Often it carried just an expression of whining and shared

frustration about their lives in poverty and hopelessness. This earned them solidarity with fellow students. Some of them revered *gangsta rap* artists as the ultimate cultural icons to imitate. (Fact: These students were all poor with the majority being from foster homes.)

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Note: *One urban legend says that the F-word is actually an acronym, that it stands for the crime of adultery in the time of the Puritan pilgrims in the early American colonies. The adulterer was locked up on display in the town square in a pillory, unable to move for days. The jailer would post a court paper stating why the person was locked up. In this case, For Unlawful Carnal Knowledge abbreviated F.U.C.K. But linguists know that its origin is German, from the verb ficken. The F-word's three hard consonants certainly make it an emotive, power word. Said male-to-male, it certainly sounds threatening, seeking dominance. Other explanations about the origin of the F-word are out there.*
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Some of the male students had almost no descriptive words (adjectives and adverbs) in their vocabulary to describe even the simplest things. Many of these males lived in a cultural bubble of narrow rap vocabulary and a gangster-only perception of the world. They expected violence at any moment as they competed for dominance, respect and females, largely using the F-word.

Some of the females often took their cues from the males and lacked (or chose not to use) adjectives to describe their emotions. They often resorted to vulgar words to make a point, to compete for status and to impress the others, all usually contained in one or two rushed, frustrated, fragmented sentences.

These individuals' use of the F-word, and two other crude power words (*shit* and *bitch*), can easily be seen as an example of *groupspeak*. They take their cues from their peers. They acquire their gangster culture and personal style from their rap culture icons and from their peers who do the same. They end up mimicking each other in a virtual prison cell of a micro-culture. Not to do so would make them *uncool* or unaccepted in the group, getting them quickly, painfully labeled as *not one of us*. Rather than seeing how destructive and painful their mindset and their micro-culture are, they cling to it as the center of their personal identity. It works the same way in any group. Identity is the key to group belonging.

Why would one ever become or remain a member of such a stultifying group? Because something in the group (at least once) gave them a good feeling about themselves amidst their confusion and general lack of good feelings. Also, a member of one group may perceive *all other groups* as either too good for him or her or as above their standard or as just too different. In other words, their niche of associates often represents their lowest common denominator, not their highest. This is *going low* in one's life, instead of *going high*. They are stuck, unable to expand and improve themselves. Some are so suppressed by their group that even being stuck in ignorance and poverty seems "cool."

We choose our groups, or they are chosen for us by our birth. We acquire the group's language and get conditioned to see *our* place in the group. Group belonging fills an emotional need. Like the teens, just for a place to belong, most people will believe, talk, dress and behave in whatever ways the group that accepts them wants and does.

Moving up to a better group

Fortunately, most of the teens in our multi-year classes learned new descriptive words by reading word definitions and news articles aloud. Many of the students began to explain themselves kindly and more accurately. This gave them a way to enter into kinder, more progress-oriented groups in the future. Some of them started to talk about graduating from high school, going to college, and getting a career. They started considering new ways to get ahead instead of assuming that drug dealing and shoplifting was their only possible path.

Their self-esteem increased as they spoke about these new thoughts they were having about themselves, about a new self identity. Why did it work this way? They sensed that we liked them and that we wanted to consider them equals. That was a first time occurrence for many of them. They sensed that they could have far better lives if they changed their self-identity from negative to positive and had a kinder, progress-oriented group identity, since theirs was stuck in peer group mud. (See <https://en.m.wikipedia.org/wiki/Belongingness>)

Limited language

In every group, limited language always goes along with the members' limited mindset. In fact, limited language in groups is the cause of our limited understanding of how things really are. (See Appendix B, #9)

Language does two things for us. It provides the communication of ideas between individuals, *and* it confines ideas to needed limits (except for the f-word with its multiple, vague meanings). The most fearful and conservative individuals in the group guard these limits of group language. They don't want anything to change or morph in their ideology, whether liberal or conservative. Nevertheless, the least fearful and most audaciously progressive individuals always question and attack these limits forcing them to slowly expand or morph in the culture. This often generates new words or new combinations of words.

Consider what it took to get the correct model of the solar system ("heliocentric") into our collective heads when the fearful, religiously conservative majority demanded that the *Bible* places the Earth at the center with the sun and stars revolving around it. The Catholic Church even found the early astronomer Galileo guilty of heresy for this and placed him under house arrest for the rest of his life. What was the crime? He looked through his telescope, and reported what he found: the Earth revolves around the Sun.

Early astronomer Johannes Kepler (1571-1630) and his wife, Barbara, created a secret code to write to each other about astronomy. They were at risk of arrest and execution by church authorities for studying the night sky.

The Christian clergy always wanted the Earth at the center with the sun orbiting it, because Earth was the centerpiece of the Bible's creation story. Pagans had once worshiped the sun as the Greek god *Helios*, the Egyptian gods *Horus*, *Ra* and *Aten*, and the Roman sun god, *Sol Invictus*. Therefore, the sun could not be said to be at the center. That would have been pagan. For Christians, pagans were the opposite of *one of us*.

This guarding of the culture is especially strong in powerful religious cultures. It's why religious cultures exist: to keep members of the group together, where the glue is a limited, specialized vocabulary for their ideology and a unique group identity. To guard the ideology, they develop an *us-versus-them* mindset that can become militant and murderous. This becomes particularly acute when new discoveries lead to big changes in everyone's ideas about how nature is structured and what their lives are really about. Many people in the group want updates and improvements, but this is impossible when the group's authoritarian leaders punish them for trying.

Specialized language

Our classes of teenagers represent just one example of a group with *groupsspeak* holding it together and preventing it from changing. Your group has its own unique and limited groupsspeak also. Whether you are a Catholic, a Pentecostal, a Baptist, a Muslim, a Mormon, a Jew, a Jehovah's Witness, or a food service worker, an accountant, a pharmacist, a bank employee, a geneticist, a computer programmer, a pastry chef, a dental hygienist, a guitar player, a neurosurgeon, a New Age vegan hippie, a diesel mechanic, a lawyer, a gynecologist, a cosmologist or a carpenter, you belong to that sub-culture not just by identity, but by its language. You use its vocabulary that is often foreign to outsiders. It's difficult to understand others speaking in their *legalese*, *technotalk* or *religionspeak*.

Even if you are a cosmologist, you are limited by the current dictionary's words. You are forced to create new words, to bring back forgotten words, or to use new combinations of words for new discoveries, like *lepton*, *cosmic ray*, *quark*, *gravity well* and *Big Bang*. (See Appendix B, #9).

You won't find the words *bacteria*, *galaxy* or *electricity* in the *Old Testament* (*Torah* and *Tanakh*), the *New Testament*, *Book of Mormon*, or the *Quran*. Those books were from or about a time before scientists discovered these things. Bacteria, galaxies and electricity were in existence when these religions were started and their books were written, but the writers of those scriptures were men trapped in superstition, dogma and fear of spirits, a devil, a make-believe god's wrath and being sent to hell for eternity. Mystical thinking ruled.

Aware?

We all developed an understanding of the world in childhood, but we got much of this from parents and other adults. We figured that they knew everything correctly. Sometimes when we asked them *why*, they just answered with authority: "Because." Believers, when questioned about their rationale, often use "Because the scriptures say so!" as their unchallengeable, but vacuous answer.

When believers insist that their religious book is all that anyone needs to know, development of what more could be learned gets shut down. But life is a learning marathon with no finish line, only an odometer reading. How far *you* get in understanding the true nature of things depends on ridding yourself of any ideology that wants you to shut up, follow faithfully and not ask questions.

Successful religions build groups of people who believe that they are "chosen people" in possession of "absolute truth" from a deity who prefers them to all others. But these believers are unaware of what they don't know yet. They are unaware that they are unaware. They are unconsciously incompetent. This kills progress. Getting rid of our ignorance is a big responsibility that we have. It's the only way to leave the world a better place for those who come after us. If we pass ignorance on to the next generation, our lives were grossly wasted.

The four states of competence

- **Unconscious incompetence:** Not knowing that you don't know something. You remain oblivious
- **Conscious incompetence:** Knowing that you don't know something. You perform your due diligence (find documentation and/or get experience) to become competent
- **Conscious competence:** Knowing that you know something and can factually demonstrate it at any opportunity
- **Unconscious competence:** Knowing and doing something so well that you don't even need to consciously think about it (Like playing musical scales without thinking.)

Honest teachers and the best trainers operate from the states of *conscious incompetence* and *conscious competence*. They know what they don't know and they know what they do know. The worst are those in the first state of *unconscious incompetence*. They don't know that they don't know what's been proven contrary to their assumptions and traditional, old ideas. They *believe in* the inaccurate ideas that they have acquired (or that acquired them).

Trying to win the lottery

Lotteries depend on the unconscious incompetence of the playing public. Some lotteries post bar charts on their websites showing the frequency of drawn numbers for the past year. Many players pick their weekly lottery numbers based on which numbers have

been drawn the least in the last year. This is called *the gambler's fallacy*. But there's no law in the universe requiring the least-drawn numbers to make more frequent appearances after any point in time. But many gamblers still *believe* that they can sense when a number is due to come up. If it doesn't, they dismiss it as randomness. But if it does randomly come up, they often say that they knew it would. This is nearly identical to beliefs in magic, psychic powers, the power of prayer, and all religious stories claiming to predict the future.

Heaven Hold'em Poker

Christians and Muslims are gamblers. They bet on their group's concept of an afterlife being real without any proof that there is such a thing. They rely solely on hearsay evidence. All Christian and Islamist martyrs bet their lives on an afterlife and then died. Self sacrifice is no proof of an afterlife, just of dedication to a cause. In this life, they lost everything.

Rick Warren didn't die a martyr for his religion. He is benevolent with the millions of dollars he has gained by promoting god, Jesus and the *Bible*. He wrote and sold religion books and he heads a wealthy mega church.

In a debate Rick revealed that his reason for being a Christian is based on a safe gamble. *Newsweek* magazine asked him to debate neuroscientist Sam Harris on the question, "Is God real?" (See *Newsweek*, March 31, 2007) Rick Warren said this about their differences, "I'm betting my life that Jesus was not a liar. When we die, if he's right [Sam], I've lost nothing. If I'm right, he's lost everything. I'm not willing to make that gamble."

But it's not about gambling at all.

Jesus' introduction of a kind morality was good stuff. However, Jesus never wrote anything that became even a tiny chapter in the *Bible*. Decades after his death, others wrote all the words attributed to Jesus and all the stories about him, creating a new opportunity.

Using this kind of second-hand information in a court of law is called *hearsay*. It's not permitted as valid. Hearsay is notoriously full of inaccuracies because the story gets changed the more people have told it to others and as time erodes the details in people's minds. The words that became the New Testament have even changed meaning in translations from the original Aramaic that Jesus spoke.

Rick's statement is deceptively framed so that one either sides with him, or is calling Jesus a liar. (A horror!) This polarizing tactic immediately blocks believers from even considering the ideas of his opponent. Sam got cut off and run over by a ploy called *Appeal to Loyalty*. (See http://en.wikipedia.org/wiki/Appeal_to_loyalty)

Rick suggests that if he has chosen the winning belief system then he has hit the jackpot of all jackpots. But if he is incorrect, he will suffer no loss. He will simply die into oblivion instead of into a never-ending Christian praise party. But Sam isn't interested in hearsay testimony or gambling. He's interested in finding out what is real. That's what a good scientist does. Scientists aren't Bible thumpers out for a slam to impress their flock.

Rick's bet actually goes back a few centuries to the 1650s and the French theologian Blaise Pascal who originally made this argument. Pascal assigned a fifty percent likelihood that a legendary god, worshiped by an ancient Hebrew tribe, created our universe with incomprehensible magical powers and still lives *somewhere* beyond Earth. Why did he assign such a high likelihood? He was Catholic. Anything less would have been heresy.

For religious leaders and their devout believers, their bets *do* have a negative impact. A believer *does* have a lot to lose. Living in a religious worldview has a very large *missed opportunity cost*. Despite their good deeds, believers spent their time and money on religious activities, resisting science education and pretending that the supernatural was real. Instead, they could have learned the way things really are and helped others to avoid ignorance and wasted years studying old scriptures, hoping to achieve an afterlife jackpot. Religious leaders are still promising their followers an afterlife jackpot, thus wasting believer's lives.

It doesn't matter how creative, sanctified, sincere or enthusiastic one is when one's basic premise is profoundly flawed. It's only painful at first to let go of the idea of a lovely

afterlife with a robe-wearing creator-god who radiates like the sun. First you feel very alone. Then it soon settles in that nothing changed except your understanding of the way things really are in the universe.

Who wrote the Bible?

Religious legends were passed on for a few thousand years. Later, Hebrew and Greek scribes (rare fellows who knew how to write) wrote down some of the stories and hand copied them over many centuries until the invention of the printing press. Now Evangelicals claim that the *Bible* is the unchanged word of their god from ancient times. But Bible scholar Dr. Bart Ehrman found that there are more differences in the surviving 5,400 old, handwritten (in Greek) copies of the New Testament than there are words in the entire New Testament. (See the book *New Testament: An Historical Introduction To The Early Christian Writings*)

Worse yet, the Bible stories depict a creator who abandoned his creation to starvation, inhumanities, diseases and the mayhem of differing beliefs in him.

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Note: Who wrote The King James Bible? *Eight English deans, an archdeacon and four Puritans (wanting to do away with some Catholic concepts).* Who wrote the Book of Mormon? See <https://wordtreefoundation.github.io/thelatewar/> Who wrote the Quran? Mohamed's followers after his death. Who wrote the Jehovah's Witnesses' bible? A committee of Jehovah's Witnesses in 1947. Previously they used the King James version. Who wrote the NIV Bible? See http://en.wikipedia.org/wiki/New_International_Version
.....

Who uses the Bible ("God's word") to promote their money-generating agenda?

Clergy, politicians, authoritarians, propagandists and "business men" using the tax-free shelter of religion to build a financial empire. (See <http://www.newsweek.com/2015/01/02/thats-not-what-bible-says-294018.html> and <http://news.yahoo.com/ex-members-church-where-teens-beaten-talk-decline-142926191.html>)

There's no god to protect us

If there actually were a biblical, creator god, he put us in the middle of a random shooting gallery, where our planet is a target. There is a lot of debris flying around in space. Some of it is solid rock and some is very large chunks of ice. The outer planets, the Sun's and the Earth's gravity constantly alter their courses. Some hit our planet. (See <http://neo.jpl.nasa.gov/news/news186.html>) Astronomer Preston Starr notes that eight to ten space rocks the size of a truck burn up in our atmosphere every year.

On February 15, 2013 a small asteroid estimated at 50 feet in diameter entered Earth's atmosphere over the southern Ural Mountains in Russia with a speed of 34,000 miles per hour. It exploded in an air blast over the city of Chelyabinsk. More than 1,500 people were injured from the sonic blast breaking windows in apartments and office buildings. A fragment hit a factory destroying it. (See <http://www.bbc.com/news/science-environment-24839601> and <https://cneos.jpl.nasa.gov/fireballs/>)

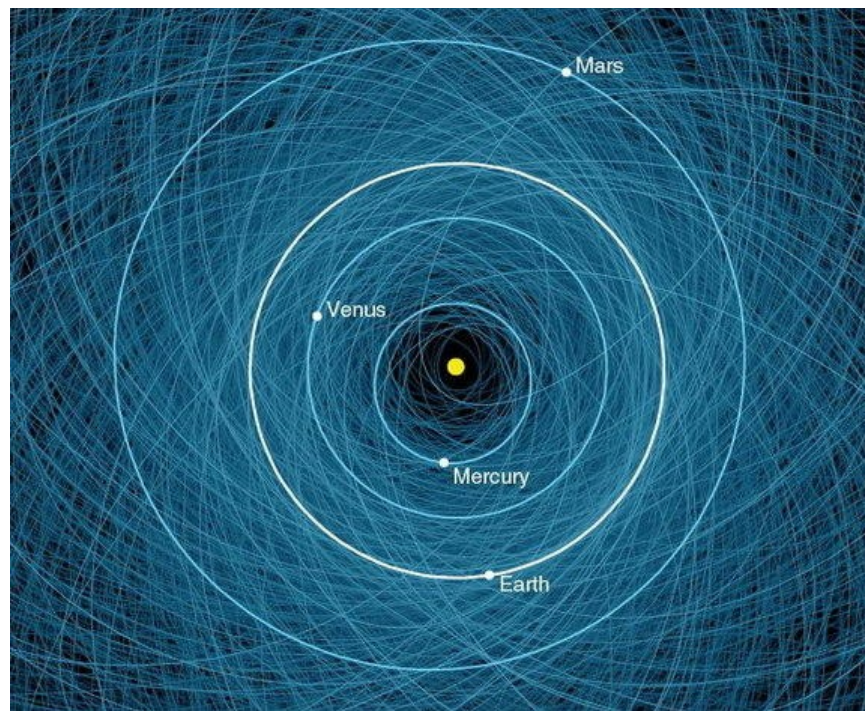
Another big asteroid is headed toward Earth. It's called asteroid 99942 Apophis, named after the Egyptian sun god's archenemy, Apophis, the god of evil, darkness and the underworld. It will pass near to Earth on April 13, 2029, and again on its return from a swing around the sun in 2036. (See <https://cneos.jpl.nasa.gov/doc/apophis/>) It's over 1,000 feet in diameter. It weighs millions of pounds and is traveling at thousands of miles per hour.

The asteroid that blasted the huge Barringer Crater in Arizona 50,000 years ago

was less than 200 feet in diameter. It spread a rain of fire and molten rock over a very large area. (See <http://www.meteorcrater.com/>). Another asteroid of about the same size was discovered *just one day* before it passed Earth in late August 2016. (See <http://gizmodo.com/a-previously-undiscovered-asteroid-came-very-close-to-e-1785910481>)



The Barringer asteroid impact crater in northern Arizona – U.S. Government



The orbits of 1,400 known asteroids with Earth collision risk – NASA graphic

Is the Sky Daddy god of the *Bible* crazy, putting all those asteroids there to threaten us? Or are we just in a massive, random debris field that is influenced by gravity?

What should we do about this threat? (See <https://www.nasa.gov/centers-and-facilities/goddard/planetary-defense-the-bennu-experiment/>)

5. How to Figure Things Out

Science doesn't have a holy book. It has Mother Nature.

—Michio Kaku

The method

There is a method for accurately determining the true nature of things. It's called the *Scientific Method*. It doesn't lie, cheat, coerce or intimidate.

Here's how it works: Ask a question about some puzzling, unexplained aspect of nature. Observe it, study it, and gather information about it. Make a hypothesis about it, an educated guess as a testable description. Predict what may happen in the results from testing your hypothesis. Design and conduct experiments to test your hypothesis. Analyze the results of the experiments, and state a conclusion. It's now a theory. Lastly, and most importantly, report your hypothesis, expected results, experiments, test results and conclusion to your peers in the same field of study. They will jump on your theory like a pack of homicide detectives. They will conduct the same experiments, think outside your assumptions and check your work to verify that your methods, results and conclusion are accurate. A theory must provide *new* insight into how nature works or it will merely support something already discovered and understood.

Here's what makes this method bulletproof: *Nothing* is above being exposed as false. No theory is sacred or allowed to be a lie to gain someone fame and fortune. If any theory can be proved false, it must be. Belief systems (religions and political ideologies) don't play by these rules, hence there are so many of them, each claiming to be the ultimate. So, what believers forcefully claim without any evidence must be dismissed as vacuous ideas.

The betterment of all people

Science is founded on the idea that *everything* is worth investigating. *Anything less* leaves us in ignorance. Science is the story of nature as told in detail by investigators who study nature to find out how it functions. These investigators assembled their questions and discoveries into hypotheses. Then they release the results to their peers who put the findings on trial looking for errors. What withstands the testing is part of the accurate story of nature. We don't yet have the entire story of nature because scientific knowledge continues to be expanded and corrected daily. However! Like a jigsaw puzzle close to finished, there are now enough pieces in place to see the grand picture. It is viewable for the very first time in all of human history. But for hundreds of generations before our generation, there were only fictional stories—legends and myths—about the forces of nature, the beginning of the world and people.

In science, everything is open to being disproved if it can be. Science constantly corrects and perfects its understanding of nature this way.

"The goal of science is an account of the physical world that is literally true." —Wikipedia

Evangelicals flatly reject this scientific understanding, wrongly calling it godless secular humanism. But the perspective of science is cosmic, so it cannot be called humanism. It's definitely godless. If science had a god, there would be priests of science who would reject any new findings that they felt threatened their income and their prestige. Investigation into nature would have to cease and be replaced with the priests' personal opinions about how people were to believe nature is arranged, not how it really is.

While free science *breathes* the life of free inquiry into us, belief takes it away. Genuine science gives us tested, factual understanding. Religion demands blind faith and the rejection of threatening facts. Science works for genuine progress. Religion works for itself.

A big leap forward

Who first applied the scientific method? Go figure. It was three Muslim scientists.

Ibn Sina (known in the West as Avicenna) was a Persian doctor from what is today southern Uzbekistan. He lived from 981 to 1037 and made his living as a healer to the rich and powerful of his time. His career afforded him lots of free time for experimenting.

Ibn Sina made accurate observations and drew conclusions about the origin of mountains. He figured out that the mountains were actually formations of rock laid down as sediment at the bottom of prehistoric bodies of water. The sediments dried and hardened. Some pressure under the Earth had merely pushed up the layers. (Even the top of Mt. Everest used to be the floor of the ocean!)

One of Ibn Sina's colleagues, Ar-Razi was an early physician, chemist and biologist who first made rubbing alcohol and kerosene. He used the scientific method to figure out where the most hygienic places in Baghdad were. He hung chunks of meat in different places around Baghdad. He then took measurements and made notes to determine where the meat decayed the least over an equal period of time. Then they built a hospital on the site that had shown the slowest rotting of the test meat.

The third was Ibn al-Haytham (known in the West as Alhazen) who was born in southern Iraq in 965. He studied the nature of light. He insisted that to discover the true nature of things one had to be the enemy of one's own prejudices and assumptions.

Numerous western scientists have described the era of scientific achievement that has resulted from Ibn Sina's, Ar-Razi's and Ibn al-Haytham's method as *a social miracle of the first order*. This scientific method has proven that maintaining sanitary conditions prevents epidemics. Most of us owe our lives to this discovery because our ancestors improved their habits of personal hygiene. As a result, they survived to make offspring who survived, eventually leading to our generation, our bodies, our lives.

What has science revealed about religious belief?

"Religion works exactly like a drug—like cocaine, or methamphetamine—or like music, or like romantic love. All of those experiences on some level tap into rewards. The physiology is really the same." (Jeffrey Anderson, a radiology professor at the University of Utah who studies religion's effects in the brain.) Furthermore: "Science is constantly proved all the time. You see, if we take something like any fiction, any holy book, and destroyed it, in a thousand years' time, that wouldn't come back just as it was. Whereas if we took every science book, and every fact, and destroyed them all, in a thousand years they'd all be back, because all the same tests would produce the same result!" --R. Gervais

6. Big Perspective

Trust that still, small voice that says, 'This might work and I'll try it.'

—Diane Mariechild



The Milky Way over Hawaii – U.S. Government

Heaven is viewable nightly

Go out to the darkest countryside on a cloudless, moonless night. Take a blanket, a pair of binoculars and a telescope on a tripod with you. Lie on the blanket and look straight up at the thousands of points of light. They cover the entire sky no matter what side of the Earth you are on.

Next, *consider* your location. Here you are, lying on the blanket, stuck by gravity to the slowly rotating Planet Earth (at about 1,000 miles per hour), while it also orbits the Sun (at about 67,000 miles per hour), in temporary darkness. You are looking out at the universe—matter and energy—made up of distant suns, planets, asteroids, comets, and clouds of dust and gases in the immensity of deep outer space as affected and controlled by gravity.

Now, put the binoculars to your eyes and take a slightly deeper look. Some of those fuzzy specks of light turn out to be many smaller points of light.

Next, look through the more powerful telescope. You can see Mars, Jupiter and the rings around Saturn. Those smaller specks in the distance are drifting clouds of stars, organized by gravity into swirling galaxies that are drawing dust, rocks, gas clouds and stars into their bright centers.

You can't venture out there, but at least you can see what the big picture is. Reality is not just us running around on the surface of our little planet. These images and your sudden awareness of the size scale of this entire view can cause you to experience a sense of vertigo, wonder and bewilderment. "What does all this mean? Where did all *this* come from? What is going on out there? What's the purpose of it all?"

7. Discovery

Once you eliminate the impossible, whatever remains, no matter how improbable, must be the truth.

—Sherlock Holmes

The Mexican & the Moon

A friend of mine is an immigrant from Michoacan who had to work on a farm as a child, like billions of other people in the world. Sadly, he only attended school through the fifth grade. He's 38 years old now. He asked very sincerely about a mystery that had been unexplained to him his entire life. Pointing to the east he asked, "Why does the Moon rise in the sky over there, cross the sky and then disappear over there?" He had no idea. I helped explain it to him and drew him a diagram on paper showing that the planets, including Earth, revolve around the sun and that smaller, round objects called moons revolve around some of the planets. I explained that we see our moon rise in relative slow motion, arc across our sky and then go down on the other side of our planet because it is orbiting the Earth while the Earth orbits the Sun. I explained that the Moon is trapped like a tethered ball in its orbit by a balance of Earth's gravity and flying-off (centrifugal) force. He was relieved to understand this mystery that had puzzled him since childhood. But, he was still a bit uncomfortable because the explanation wasn't supernatural or religious. Six months later I asked him the same question. He explained the mechanics of it.

A sudden awakening

Many religious people don't understand the basic physical laws, so they can't easily come to understand the mechanical workings of the universe. They assume a religious answer. They envision "a theological non-reality," observed New Zealand's Ruth Walker in her doctoral dissertation. She noted, "...religious beliefs are automatically given a realistic interpretation" by the believers.

Religious people say that they came from "heaven with god." We *did* come from the heavens—meaning from the material in deep space. But most religious people miss it because they don't know about the particle fusion going on in stars, the power of gravity in space and exploding stars. It's not taught in church. Worse yet, religious people have been programmed to never *inquire* deeper, like, "What is god made of?" or "Or how did heaven start?" That is off limits and supposed to be a sacred mystery. "Don't ask such questions. It offends god. All you need to know is that god works in mysterious ways that we can't know."

Those who only know religion will benefit greatly from a sudden awakening to the true nature of things by learning how nature works.

Where did all matter & energy come from?

Astronomers have used optical, radio, gamma-ray, infrared, and X-ray telescopes and equations and computers to figure out that all matter and energy came from an eruption in distant space [13.82](#) billion years ago. Who first figured this out? It was a Catholic priest, mathematician, Georges Lemaître and a Russian, Jewish physicist Alexander Friedmann. English astronomer, a doubter, Fred Hoyle, jokingly named their findings the Big Bang. (See <http://www.forbes.com/sites/startswithabang/2016/08/27/ask-ethan-how-do-we-know-the-universe-is-13-8-billion-years-old/?ref=yfp#54a5864837d4>)

If a tree falls in the forest and no one sees it fall, did it really fall, or did god put it there as artwork? Likewise, no one could have been behind the Big Bang to observe it. So how do we know it actually happened and that the stars aren't just a god's artwork?

- There is decaying, background radiation across all space, indicating a scattering at a beginning of our universe, not a steady state. (See <https://brainly.com/question/37217718>)
- Astronomers have measured the drift of galaxies relative to others. The galaxies are all moving outward from a point of origin. (See <http://astro.berkeley.edu/~mwhite/darkmatter/hubble.html>)
- After taking measurements of the drift, you can figure how far it is back in time to the place of origin in space. The number is 12 to 13+ billion years (See www.universetoday.com/100917/plancks-cosmic-map-reveals-universe-older-expanding-more-slowly/)

The Big Bang is the most accurate creation explanation we have ever had. This universe is not eternal. The results of the Big Bang are measurable and map-able. (See <http://futurism.com/popular-press-announces-big-bang-didnt-happen/>)

Way beyond god

Way beyond god? Bill was offended. He objected to this idea immediately. It sounded like a sacrilege and pure ego to even try to imagine such a thing. We were sitting on his deck, overlooking his gardens on a spring afternoon when he snapped. "There's nothing beyond god!" he thundered. Bill is (curiously) a self-described agnostic, not known for religious reactions to ideas. However, the more he heard the following description, the more he mellowed and liked it.

We could call this original Energy, and all that has come from it, what physicists named it fairly recently, *The Multiverse*. Or we could call it what a group of philosophers in India named it about 2,500 years ago. They called it *Brahman*, from the ancient Sanskrit verb *brh*, meaning *to grow*. In both views, everything inside and behind the universe, into the past infinitely, in the present, and into the future infinitely is from one thing. We are inseparable from this oneness because we are made of its energy and particles. In the Hindu view, Brahman is every rock, bacterium, plant, insect, animal and every thought (electrons on a nerve pathway in our brains), every particle in the universe, and anything/everything beyond the universe. (See <http://io9.com/its-looking-more-and-more-likely-that-we-live-in-a-mult-1654239799>) This is essentially the view that we live in a cosmic simulation!

I prefer the term *Multiverse* because it carries no religious-cultural connotation. But whether you choose to call it the Multiverse or Brahman, it nullifies all smaller concepts of a god. Using either term will dissolve the hypnotic power of religions. After all, no ancient god was ever credited in any scriptures as being gravity and all the stars, rock, inert gases and radiation in the entire universe. The Multiverse is all of those and more. It very simply represents all that is, was and will be, everywhere, even virtual particles in vacuum space.

Despite this all-inclusive view, we still tend to view things as separate and fixed. But all the complexity of nature is interconnected, constantly mixing, and changing location, outside us and even inside us.

Algae and leaves off-gas oxygen. We breathe it. Birds eat, fly and drop guano fertilizer on our food crops. The food grows, gets eaten and returned to the dirt. Large volcanoes spew mineral ash. Several tons of meteors burn up, raining mineral dust on the Earth every day. Water carries the minerals, which are taken up by crops' roots. We eat the crops. Our bodies take up the mineral elements calcium, magnesium and iron in that food to build and maintain our bones, organs and red blood cells.

We are made of tiny cells just like every bacterium, plant, tree, insect and animal. We are so closely entwined with bacteria throughout our bodies—especially in our intestines to

help us digest our food—that we could not live without them. They come and go from our bodies. There are approximately a quadrillion bacteria of over 500 different species in each adult human. (See <http://ed.ted.com/lessons/how-antibiotics-become-resistant-over-time-kevin-wu>)

Think of Brahman or the Multiverse as all of this and also every star and every wave of light, every stray wave of radiation, all the gravity in the universe, and even the fabric of space itself. Yet, all of these distinctions are temporary. Everything is constantly interacting and changing however it can within nature's organizational rules of physics (which includes chemistry).

However, *The Multiverse* and *Brahman* only serve as *utilitarian names* for everything that exists everywhere. This not our king of kings, god or protector. There's no need for praise or worship. There's no need to donate money to a religion business, because the Multiverse doesn't need priests, rabbis, theologians, ayatollahs, imams, televangelists, churches, mosques or temples.

But *why* did *everything* begin? Why is there a universe instead of nothing? "It turns out empty space is a boiling, bubbling brew of virtual particles, popping in and out of existence in a time so short that you can't even measure them," says physicist Lawrence Kraus. Physicists have photographed the trails these particles leave when atoms are smashed at high energy. (See <https://lhc-machine-outreach.web.cern.ch/lhc-machine-outreach/why.htm>) The *Book of Genesis* in the *Bible* describes a creation moment. It says, "Let there be light," which is the same as saying, "Poof! God made a big bang happen and now the lights are on in space."

Atheists often answer that the universe is simply a result of the manifest unlikely probability of possible things happening, given enough time. But even this rests on a subtle assumption that the entire universe is an improbability from the start. That assumption has a probability of being incorrect. The physics of this universe may or may not have been naturally selected for organic chemistry and living things like us to result. (See <http://www.wired.com/wired/archive/10.12/holytech.html> This is the most profound article referenced in this book!)

We like to think that we humans are the purpose behind the universe. (Works for our self-esteem, for a while.) But why should we consider ourselves the end product of the universe? Maybe our computers and robots with artificial intelligence will be. Maybe aliens in another galaxy already are.

A cave, space aliens, a shape shifter & breast milk

The religious elders of the Hopi tribe of Northern Arizona say that their first people crawled out of the *sipapu*, a sacred hole in the ground near the Little Colorado River. Spider Grandmother brought them out of the corrupt third world, and up a hollow reed beside the river to begin their lives on this fourth world. They believe it. Their accounts from storytellers vary some details but are passed on as their creation myth each generation.

Some UFO believers imagine that our ancestors came to Earth as humans transplanted from another world. But that just begs asking, "Where is that world and how did it come to have advanced life?"

Judeo-Christian-Islamic mythology teaches that an alpha-male deity, as a spirit or a shape shifter (shifting between being a burning bush and human), created the Earth quickly somehow in six rotations of the planet (six days). He (the shape shifter) then walked (like a human) in a garden on it with the first two spontaneously created humans. The male was a replica of the god in bodily form. The female was a mere servant to the male, made from his rib. She was prone to disobedience, to talking with a devil snake, and to poor sexual (or apple harvesting) ethics. But all this just begs asking where this shape-shifter-creator came from and how he got that way. Did DNA build him into a human like it did us? Does he eat and have bacteria inside his intestines to digest his food? Or is he an inter-galactic flying man who just exposes his photo-voltaic skin to the radiation of stars to recharge his power

packs? Believers don't question their model of a supreme human male as their creator. Their mental model of a creator has become part of their religious group identity. It's not based on any direct observation and testing. The myth is lazily taken on faith as certain.

The ancient Greeks had a much larger, kinder, creation story. They fantasized that the dots of light arranged in a dense, broad band from horizon to horizon in the night sky, were the result of a human-like goddess accidentally spraying some of her breast milk into space while nursing her child-god. That's why the Greeks named this star cloud in the night sky *The Milky Way*. Our word *galaxy* comes from the Greek word for milk. (*Galactose* is milk sugar.)

The family of animals that humans belong to is called *mammilla*, Latin for *mammal*. This word labels those species whose females have mammary glands to feed their young milk. In this sense the Greeks promoted a model of *god-as-mother* in their religious culture. It certainly made the night sky feel like a warm and *nurturing* place rather than a cold, dark, scary place to the ancient Greeks. After all, being breast-fed feels warm, soothing and protective for us as infants, while being supplied with needed nutrients. Most of deep, dark space is not warm, so why not make a story that makes it seem hospitable? The Greeks did.

Despite the fact that Western cultures are descended from the culture of the ancient Greeks, the dominant religions are based on the Hebrew stories. The patriarchal Hebrews rejected a female model of deity. Patriarchs got more excited about a vengeful, male war god than a breastfeeding goddess.

The early Hebrews also left out of their *Book of Genesis* any explanation of the physical qualities of the universe, of the stars we see every night, of the web of supporting lifeforms and of the daily rotation of the Earth that gives us days and nights. They didn't know, so their story lacks much. Even anti-science Christians call it "the word of God."

Black holes suck

As it turns out, that band of glowing stars that the Greeks named The Milky Way makes up only one of the sweeping arms in our rotating, spiral galaxy. Astronomers have given our whole galaxy the name *The Milky Way* anyway. (It's the only galaxy that doesn't have a number assigned to it. It's our home galaxy.)

Our sun is one of a billion stars in just one of the curved arms of our galaxy. The arms are made up of inert gases, some organic gases, burning stars, planets, comets, and rock (from tiny grains to huge asteroids). The center of our galaxy is 26,000 light-years away from us. Planet Earth is located in the middle of an arm that is halfway out from the center of the swirl.

The entire Milky Way is about 100,000 light-years across. It takes roughly 226 million years just to make one orbit around the galaxy's whirlpool. A central, dense object of immense gravity causes the whirlpool. This object is called a *black hole*. It's a *gravity well*, a sink that pulls everything in. It eventually accretes (draws in, sucks up) all the objects, dust and gas in its vicinity. For us, this happens in super slow motion because where the distances are great, its gravity is weaker.

Before our sun and planet Earth get swallowed, our Milky Way galaxy will collide with the massive Andromeda galaxy. The collision will rearrange the pattern of everything orbiting them. The resulting galaxy will be enormous as it continues to move through space.

Scoping it out

Our galaxy and Andromeda are just two of a very large number of similarly shaped galaxy groups drifting away from a far-distant center where the Big Bang occurred. Our Milky Way Galaxy also slowly rotates around the Local Group of galaxies. This Local Group is being drawn toward a distant, massive black hole that has been named The Great Attractor

deep in the Virgo cluster of galaxies. The speed of this drift toward far distant Virgo is one million miles per hour.

This scope of nature makes us and our gods seem less than minuscule, yet here we are with brains big enough to finally build telescopes, figure out where we are and what is going on all around us.

Night vision

Galaxies were first seen in detail at night though telescopes in just the last 170 years! Natural vision evolved in humans to be sufficient to merely see each other, to get food, to pick off insects and to watch out for predators. We can't see well at night like most other animals because humans are adapted to hunting for food in broad daylight. We sleep at night and didn't need night vision as daytime hunters and gatherers.

We can only see distant galaxies with a telescope. Even better, we can now convert other forms of light and heat from distant galaxies into the narrow range of light that *is* visible to our natural eyes. We have photographed and mapped them using space telescopes and radio telescopes on Earth. This all makes a picture that expands and corrects our previously limited view of where we are and how things work in stars and galaxies.

“Heads? God wants it that way. Tails? God wants it that way.”

No one can easily terminate the illusion believers want to have that their god exists and that he magically created them. People will believe if they are emotionally in need and a god group offers them a place to belong. That's religion's only power. Their group faith can become the most important thing in their lives. To protect their faith they suspend logic and make up justifications when their beliefs are challenged.

Here's an example: The faithful consider it their *god's will* either way that things turn out, good or bad, heads or tails. But they also insist that their god gave each human free will. When things go good, the believers say their god has truly blessed them. When things go wrong repeatedly, they say, “It's god's will. “God knows best. God has a higher purpose in this.” Even if one's entire family dies or is murdered by other religionists, their god cannot be blamed. Chaos and destruction must be accepted as god's will. After all, Christianity and Islam teach that a perfect *afterlife* in the heavens awaits the faithful. Then why worry about one's losses in this life when the big prize awaits overhead after dying?

God as a man?

“God” is thought to be a human-like monkey (Rama) and also a human-like elephant (Ganesh) in India by a lot of people. Humans have been ascribing human and animal qualities to inexplicable aspects of nature for thousands of years. We have been telling these stories in caves and around campfires for at least the last 50,000 years. This is called *anthropocentrism*, a human-centered view of all things with mankind as most important, at the center of the creator-god's interest. Anthropocentrism's great *use* has always been purely emotional. It made us feel that we were supremely important (better than animals) and not alone when we look up at the mysterious, cold and lonely expanse of the night sky.

Plenty of people have wanted the emotional security that comes with an absolutely certain belief in a human-like, male god. A father god became far more important than a mother god, because in our fears only *he* could protect us from the bad forces, from devils, or from anything macho that could cause us harm or death, they hoped.

When our ancestors switched from worshiping many gods to worshiping just one god, they thought they would get more benefits for their prayers to a physically powerful male than to a less physically strong female. Your mom could never beat up the bad males who attacked you, but your dad could. After all, most of the other gods of other tribes were

males. Plus, it would be out of character for a god-the-mother to smack the bad guys, but a god-the-father might *smite* your enemies for you if you prayed to him devoutly. As the biblical narrative goes, Moses only needed one all-powerful male god, who he devoutly worshiped, to *smite* the Egyptians who were chasing him.

All of the gods we created in the polytheistic religions in ancient times were mostly like us. From the gods of the ancient Greeks, Hebrews and Egyptians, to the gods of the Vikings and other tribes, people gave their gods human characteristics and qualities. These include arms, legs, heads, children, a noble family heritage, and usually great physical size and strength to fight opponents. Above all else, people always gave their gods what we don't have. They gave them immortality.

Hearing stories of human-like gods who created and sustain the natural world is a form of lullaby for adults and children. It causes us to feel special and nurtured, created by a god, in *his* image, and loved as his offspring.

Most of us grew up with some form of religious fiction that could not be questioned. This was a clever tactic to keep us from wondering, speculating, or from becoming forlorn and losing hope that the universe and our life may have no meaningful purpose. It was intended to keep us from hurting each other. After all, the male god might return and brutally discipline his bad, brutal children for hurting his good, kind and cooperative children. This still keeps some brutes in line, making them believe that they may go to eternal hell for disobeying the law of the god. Obviously it has only worked on some bad guys, but religious fiction has also kept many from living in despair that they will have no future happiness. It claims to offer them an afterlife as a happy family reunion with deceased loved ones. But most significantly, religious fiction keeps the top religious leaders in power, prestige and money. That's why preachers claim that every word of the *Bible* is the absolute word of their god. They long ago found that if they claim ancient authority and moral gravitas they achieve and maintain high status and could even get away with the crime of child rape with impunity—until recently.

.....
Note: *There seems to be very little concept of what the Muslim afterlife would be like for women. The afterlife is advertised to Muslim males as eternal sex with virgins. The activities expected in a Christian afterlife for women have only formed in the last few hundred years, particularly in America. Evangelical women expect a family reunion and picnic. Mormon women believe that they will be eternally giving birth in their group's "celestial kingdom" afterlife. Eventually, all might beg for oblivion instead of continuing in such a repetitive nightmare!*

The goal

What's the goal of life? The goal is to live. The goal is not to die and go to an afterlife. Any religious leader or group that says their afterlife is the goal is using deception to get believers for his or their personal benefit in *this life*.

So why are we alive? Reduced to the barest minimum, our purpose is to breathe, to drink water, to eat plants and animals, to excrete and to grow to maturity. All of this is for the sole purpose of getting some human eggs fertilized, to give birth and to raise our young to the age of their sexual maturity, so they can repeat the cycle. The purpose of life is to make continuous life.

We are much more complex, *higher* lifeforms than fungi, bacteria, plants and most animals who live only to eat and reproduce. We can be here for a longer time, and an extended mission, a purpose of our own choosing. But our primary biological purpose is eating, surviving, sex, birth and helping our young to survive and reproduce.

Salmon do the same thing. Their lifespan is 3-7 years. They are born in streams and migrate down rivers to feed in the oceans. They eat smaller fish and get large. They swim back to their place of birth. The females lay their genetic capsules (eggs) in stream beds.

The males spray the eggs with their genetic fluid. Both cover the eggs with loose gravel to protect them from being eaten by other fish. The parents' bodies then age rapidly becoming grotesque. They quickly die and their bodies drift, get caught in rocks or end up half submerged on the river's beaches, where they are eaten by animals, birds and small fish, including their own newly-hatched offspring that nibble away at them and grow.

Humans may live to be great-grandparents, helping provision and educate their grandchildren. We value our relatives innately (some more than others).

Even if we don't have a spouse and children, we leave our assets to our siblings or our nieces and nephews in our wills. If we don't leave a will, the legal system we've established gives our assets to our closest, genetic relatives.

Dust to dust

In a matter of years, we won't be here. We will each die and return to dust. Our brains that give us our intelligence are just soft, fatty matter and will turn to dust, as all of the brains and bodies of our dead ancestors have done before us. Your religion is stored in your brain's memory. All that ends at death. It's like the memory device in your computer being turned to dust.

Primitive tribes used to cremate their dead and save the ashes in a large pot. They painted their bodies with the ash and danced in special ceremonies to honor their ancestors. Every generation added to the ash pot. "Ashes to ashes."

If you want a special existence for your remains after this life, you can now have your cremated, mineral remains made into blue, yellow and green, synthetic diamonds. Your family members could wear you as fine gemstones after you are gone! (Appendix B, #23)

The spiritual experience

Religions have trademarks, printed advertising materials, offices and organizational hierarchies of paid leaders and employees. Religions have bank accounts. They own buildings and land. All religion is commercial and financial. Its purpose is to fund its expansion and to pay its leaders. The religions benefit by gaining wealth, political power and control over more and more people. Because of all this, religion is at odds with the essential spiritual experience, which is personal, private, ethereal and *free*.

We are wired for the emotions of love, joy and awe. These emotions have survival value. They cause us to bond with our mates, our offspring and relatives instead of competing against them. When we experience joy and awe in finding out more of the puzzling aspects of our universe and about our own biology, the experience is a genuinely spiritual one worth sharing with others.

The deepest emotion is a profound sense of the fusing of one's whole being (awareness) with that of Mother Nature (wilderness), and/or with one's lover (at-one-ment), and/or with the entire universe (samadhi). But now the experience of spirituality can be generated in the laboratory. It's a process of brain chemistry and blocking the release of serotonin while stimulating the releases of dopamine and noradrenalin. Our genetic makeup determines if, or to what extent, we can experience a high level of these brain chemicals naturally. One gene in particular may be responsible. It's been cataloged as gene VMAT2. While this gene may predispose us to feeling spiritual, it has nothing to do with the belief system or religion in which we end up. That part is cultural. You get infected or inculcated with a belief system from other people.

What do people need?

Beyond the basics, a well-lived life consists of developing one's potential, having peak experiences and understanding the workings of nature on Earth and in the universe. The process of filling one's life with the good experiences is called *self-actualization*.

By our nature, we need to experience things. Some need to experience a lot more than the usual. Hunter Thompson said, "Faster, faster, until the thrill of speed overcomes the fear of death!" (See https://en.wikipedia.org/wiki/Terror_management_theory)

Why can't we easily see the obvious in Nature?

Almost no household has a microscope and a telescope that family members use daily to investigate nature in the world and the galaxy. Churches, mosques and synagogues don't offer them. What one sees with magnification is not mentioned in the old religious scriptures. Therefore, it's all too strange *to believe*.

Worse, classes in logic, reasoning and critical thinking skills are largely missing in schools. Religions certainly don't teach these skills to their believers. People are hindered by not having these skills. Believers learn to think and reason by emotional comfort level. For believers, what feels traditional, familiar and comfortable must therefore be *true*. This often makes scientific facts uncomfortable and therefore *untrue* for believers, even after those facts have been proven correct over and over again in the real world. (See <http://www.sciencedaily.com/releases/2012/04/120426143856.htm>)

Developing your critical thinking skills is valuable. Why? You can't be tricked and misled if you have them! People who don't have them are gullible. (See <http://www.criticalthinking.org/starting/Begin-CTModel.cfm>)

The lack of critical thinking in the world is a huge problem. People who don't know how to apply critical thinking skills get preyed upon by con artists who use the victim's assumptions and emotions to easily get through their defenses. People lose when the ideas of a silly or dangerous group make emotional sense to them and they decide to join and *believe* wholeheartedly. (See http://en.wikipedia.org/wiki/List_of_fallacies#Informal_fallacies)

Critical thinking leads one to real answers in complete agreement with the evidence. It also leads to asking better questions that are not based on incorrect ideas or assumptions. This saves years of life not spent in religions with faulty explanations of our origin and purpose, and it saves us money while shrinking the donations to wrong causes.

Why do we invent gods as superheroes?

When life deals us crushing blows, the enduring mental escape mechanism is to think of a higher power than ourselves and to fantasize that this life is not the endgame for us. Those who wronged us will be judged and sentenced by god, the superhero judge.

For many, going to the movies and watching a supernatural hero on the screen righting wrongs restores some hope and balance to a meager outlook. "...we need superheroes to tackle problems that are too tough for mere mortals to handle," said David Wright. The most revered superhero in cultures across the globe is the fantasy character from the creation myth of ancient Hebrews: *Gott* in German, *God* in English, *Dios* in Spanish and *Deus* in Portuguese and Latin (from the ancient Greeks' god of the gods, *Zeus*).

How do we get free of believing in such things?

'I'm a Bible believer. I was born to devout Christians. If there's no God I will be decimated with sadness. Life will mean nothing any more. Therefore, no matter what anyone says, discovers or figures out, I will never stop believing in God and the Bible.' – Sean

'I'm a Jew, born to devout Jews. If there's no God of the Jews, I will be decimated with sadness. Life will mean nothing any more. Therefore, no matter what anyone says, discovers or figures out, I will never stop believing in God and the Torah.' – Josef

'I'm a believer, not an infidel, born to devout Muslims. If there's no God I will be decimated with sadness. Life will mean nothing. Therefore, no matter what infidels discover or figure out, I will never stop believing in Allah and the Quran.' – Yusef

'I'm a Mormon. I belong to God's restored and only true church. I was born to devout pioneer-heritage family in Utah. If the church is not true, I will be decimated with sadness. Life will mean nothing any more. Therefore, no matter what anyone says, discovers or figures out, I will never stop believing in God, in the Savior and in Joseph Smith, The Book of Mormon and our living prophet and apostles in Salt Lake City.' – J. John Johnson VII

What were you born into?

Obviously, sadness and the loss of family tradition and old meaning are very scary to contemplate. But, should one maintain a dysfunctional and irrational worldview based on emotions and peer pressure? Or does one lift oneself up out of the incorrect into the real?

Every day, quite a few more people realize that life, love, the pursuit of happiness and the accurate understanding of how the universe works is vastly grander and supremely better than ancient, tribal mythology. (A good place to start:

<https://www.nationalgeographic.com/science#aec8349a-fc62-4003-a0dc-70e677d97502>)

(Scroll down to "Origins of the Universe 101.")

One anonymous person on Reddit.com got free and put it this way: "Once I started doubting god had influence over evolution, his only role became the trigger puller of the Big Bang. Then I realized a god isn't necessary for any of this."

Believing in Religious Tradition: Peer pressure from dead religious people.

8. Answers Not in Genesis

Stars have died so that we could live.

—Preston Cloud, geologist



The iron-core star Eta Carinae's pre-explosion burps - NASA

Star chemistry

British scientist James Lovelock said, "Our planet...consists largely of lumps of fall-out from a star-sized hydrogen bomb." So if the Earth is made of the remnants of exploded stars, then our bodies are also made of that same dust because our food grows in it. Therefore, your body's chemistry has a heritage that goes back to an exploded star and even earlier, to the Big Bang. (See <https://en.wikipedia.org/wiki/Nucleosynthesis>)

Star dust experiences generations of sex

A few people never get to meet their biological parents. Many others don't know the names of their grandparents, or anything about them. Researching birth and death documents to find out who your recent and distant ancestors were is called *genealogy*. It's gene history. Many people research their ancestry in genealogy libraries or hire a professional genealogist to do it for them.

The youngest human mother on record was a Peruvian girl who was 5-years, 7 months old when she delivered a boy (by Caesarian section) in 1939. A nine year-old Mexican girl gave birth in Jalisco state in early 2013. An Albanian woman got pregnant naturally, giving birth at age 57.

On average, worldwide, throughout human prehistory, people died earlier than we do today because of infected wounds and diseases. Some made it beyond age 30. So let's say that on average, females in prehistory had their first child as early as 14 and their last by the

age of 26 years. Then females gave birth to a new generation at an average age of 20. This *average* age is higher in developed countries today, but has been approximately 20-years worldwide in tribes over tens of thousands of years. They didn't have birth control methods.

Men can be almost any age and sire children, so only the females count in this calculation because they give birth to the next generation.

As a rough average then, there were five generations of people every 100 years (a century). We can calculate 50 generations every 1,000 years (a millennium), 500 generations every 10,000 years (10 millennia), 5,000 generations every 100,000 years (100 millennia), 50,000 generations every 1,000,000 years (1,000 millennia). Voila! Here we are alive and pondering it.

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***Note:** There have been many changes in the bodies that our genes have produced in the last 50,000 generations. Some of those changes were adaptations to different climates. Some traits our ancestors chose to reinforce by selective mating. Many different groups went extinct. Our lineages survived.*
.....

Tool time

We have to dig in the dirt and rocks as archaeologists to glimpse our distant ancestors' lives. How long ago did our ancient ancestors begin to leave objects behind that we can find, date, and use to figure out things about their lives? About 185,000 generations ago they made the first knives out of stone. Early Stone Age humans became experts in making knife, arrow and spear points from black, volcanic, obsidian rock or flint.

A mere 12,000 years, or 600 generations ago, our ancestors' numbered one million in eastern Africa (Kenya to Ethiopia). As animals and other food got harder to find, some wandered north in groups. They found plenty of animals and other food around the Mediterranean and in southern Asia. Even if they only moved 25-30 miles every generation, within 40 generations they were now deep into Europe and Asia. Some tribes likely moved 250 or more miles in one generation because they depleted the local animal herds to hunt.

In areas rich in food, their populations grew fast. As their populations grew and reduced the food supply, more of their groups walked, or built crude rafts to paddle or sail to other places to find abundant food. This is how all the major landmasses and habitable islands of the Earth eventually came to have populations of humans.

A large flint blade, tied to the end of a dried, straight branch of wood with leather strips or tough plant fiber thread, made a good weapon for hunting or for defense. Our ancestors invented this simple technology 4,000 generations ago.

About 50,000 years ago (2,500 generations ago) our ancestors started burying their dead with relics (flowers, stones and handmade items). This may have been the beginning of humans starting to imagine an afterlife.

Just 500 generations ago our ancestors in the Middle East realized that if they planted and watered a few of the seeds that they liked to eat, they would have a large number of them the next year without having to go out and gather them in remote, dangerous places. This was the beginning of agriculture, which they refined and expanded. Their population exploded with the extra food. Now they could also capture animals and feed them some of the seeds and grasses to have more animals to eat every year without dangerous hunting or leaving the area. This may have been the point in time when they invented their gods, because they suddenly had abundant food and leisure time to develop languages and to craft stories.

Despite livestock production, many men still like to hunt in the wild. It's a reconnection with wilderness and the lifestyle of our ancestral past. Today in many countries, small groups of men drive into the forest in 4-wheel drive vehicles with stereo music or DVD movies playing, then get out, set up camp, build a fire and go off to hunt with

bows and arrows or guns. They return, just as their ancestors, did with meat for the family.

Just 250 generations ago (5,000 years ago) our ancestors' population grew to 25 million people worldwide. They had to invent counting and writing to keep track of crops, harvests and land rights in the rich valleys of the Tigris, Euphrates and Nile rivers. Their lives got much easier. Suddenly, humans had the time to invent many new things, like ovens, ceramics bowls and the melting of metal out of rock. Soon they were making tools and weapons out of copper, bronze, iron and eventually steel.

One hundred and twenty five generations ago there were 200 million humans living on the Earth often battling each other with metal swords for agricultural land, kingdoms, and for whose tribal culture and creation myth would be dominant.

Around Year 1 AD (400 generations ago) there were 200 million humans living on the Earth.

Just 12 generations ago we figured out how to generate and use electricity.

One generation ago we numbered four billion and used ceramics, electricity, silicon, steel, aluminum, titanium, carbon, oxygen and hydrogen to lift off of the Earth, land on the Moon, walk on it, and return safely to Earth.

Today humans number seven billion and have had cameras on two traveling robots sending us pictures from the surface of Mars. We also have large telescopes in space sending us pictures of places that are billions of light-years away. Small migrations of people to the Moon and Mars are being planned. The U.S. Air Force is funding research on anti-gravity propulsion systems for spacecraft and also instantaneous transportation development. (See and <http://www.fas.org/sgp/eprint/teleport.pdf>)

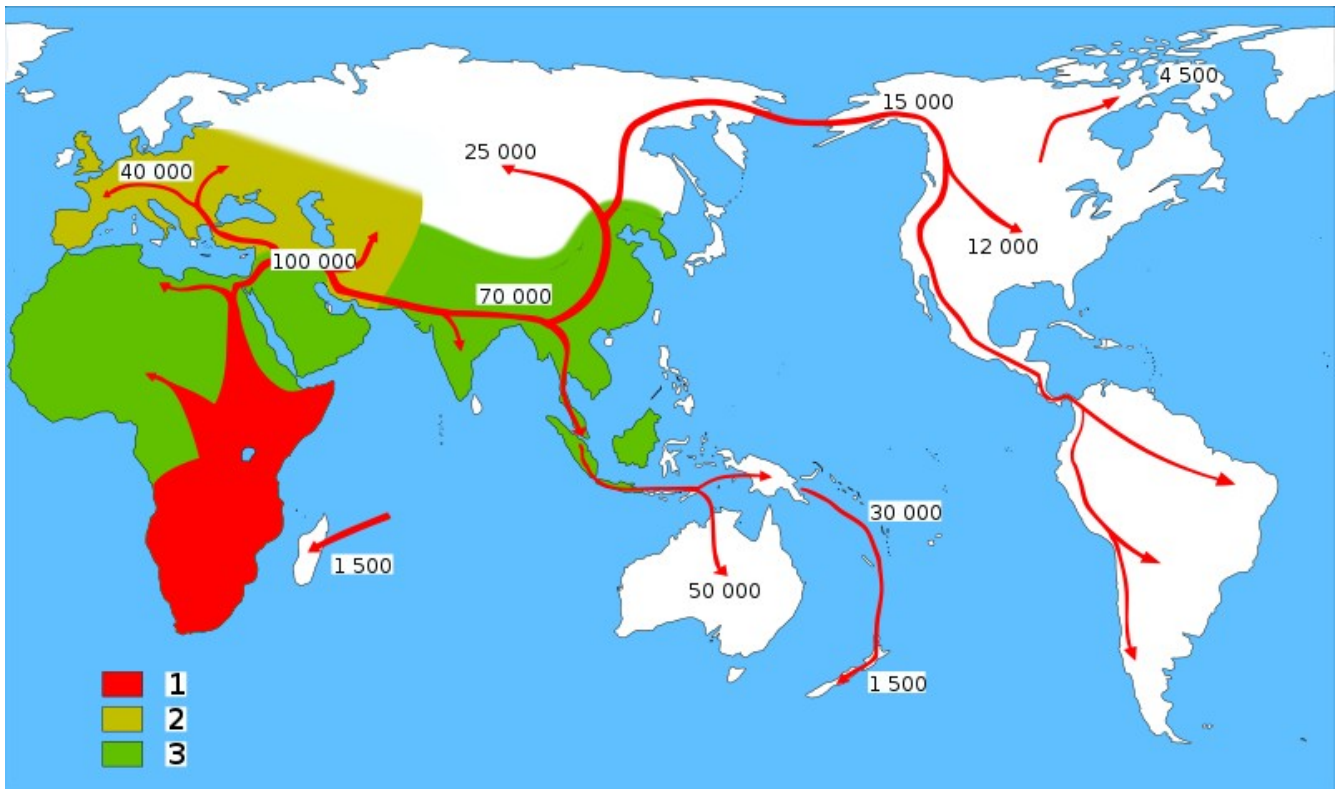
"I think the human race doesn't have a future if it doesn't go into space," said British physicist Stephen Hawking. (See Appendix B, #13)

A new tool

We also have a new tool to know where our ancestors came from. It's called *population genetics*. It uses the DNA markers that are passed down in us from both our maternal and paternal bloodlines. Samples have been taken of indigenous people everywhere. With this, you can now have your DNA tested to show the migration paths that your ancestors took thousands of years ago.

All humans are descended from nomadic Africans. Groups left Africa in multiple migrations over the millennia. Their descendants spent thousands of years in places far from Africa where their bodies changed and adapted to various climates. Some became Asians, Europeans, Australian aborigines, Amer-Indians and Pacific Islanders. Thanks to geneticist Spencer Wells and his researchers, you can now know from your own DNA which migration routes our ancestors took. The routes can vary greatly between one's father's line and one's mother's line.

You order two DNA test kits, swab your mouth to collect some DNA, and mail them back. The results will show you the migratory routes on maps of your father's male-only and your mother's female-only lineages. (See <https://www.nationalgeographic.com/pages/article/genographic> and <http://www.humanjourney.us/europe.html>)



Human migration out of Africa (numbers = Years Ago) — Wikimedia

9. A Stellar Understanding

Distance lends enchantment to the view.

—Mark Twain



"Extreme Deep Field" - Hubble Space Telescope - NASA

That's deep!

This Hubble Space Telescope photograph is the most profound and revealing ever taken. It's the deepest view we have ever had of outer space. Everything is galaxies or gas and debris clouds becoming galaxies! In this photo, the farthest galaxies are so far away that we are looking backward in time at them, up to 13.3 billion years ago. Their light took that long to travel to Earth, at 186,000 miles per second. (See <http://www.space.com/17755-farthest-universe-view-hubble-space-telescope.html>)

Cosmology is the branch of science in which physicists study all that is going on in space. Cosmologists work to discover and understand the forces operating in the universe. The goal of cosmology is to understand the origin of the universe, its processes and of what it consists. Always open to new understanding, science only adopts the model that is most rigorously proven to be correct.

Cosmologists have three tools to figure out how the universe works: 1) their own brains, which generate hypotheses and tests, 2) precise mathematical language, and 3) measurements from equipment, like particle colliders, particle collectors, telescopes on Earth and in orbit, and super computers for modeling.

Un-cool was actually very cool

We were cheated as children by the teachers we had. They withheld information. They considered us too naïve to learn important things first. (Or they didn't know them.) They filled our heads with the silly, scary and untrue ideas and nonsense in children's books and religious stories. The comic books were equally silly. Animals don't talk and wear clothes. People don't fly because they are wearing capes. Bullets don't bounce off flesh. Gravity applies equally to all. Nothing supernatural can happen. If it could, it would be *natural* not *supernatural* and investigators would run tests on it to completely understand it.

Those who grew up Christian, Jewish or Muslim were told about the ancient Middle Eastern version of superheroes at home, in church, synagogue or mosque. We were required to believe in those supernatural heroes and stories. We were told there are angels who fly using feathered wings (but without tail feathers for stability and directional control in flight). We were told that an Moses levitated the Red Sea and that the founders of religions levitated into the sky instead of dying. We were told that a woman was turned instantly into salt, that fire from the sky engraved stone tablets, that a flood covered the mountains, that a burning bush talked and a man survived without oxygen inside a whale.)

What should we call all of these impossible, supernatural stories? We should call it all *The Anti-physics* because it is physically impossible.

Most of us were given a childish model of reality that runs contrary to our observations of how things are in nature. Probably the biggest travesty of our education, beginning in first grade, was that we were not taught physics. Physics is the study of the forces of nature, the elementary building blocks of matter and how they combine and interact to create the reality in which we exist. It's a revelation to understand what is going on in nature, but only because we weren't raised on the truth. We were trained to believe in the supernatural, Bible model of god—the goat-herding Hebrews' Bronze Age worldview.

"Regardless of what anyone believes, in physics it is only nature's opinion that ultimately matters," says physicist Garrett Lisi.

Studying physics is considered *nerdy*. What would your friends say? You would be uncool, outside the range of normal in most peer groups, and even traitorous in some groups. For many, only that which their peers consider cool is worth thinking about, doing, joining and respecting. But compared to physics, the teachings of religion are just primitive. Here's why: Those who studied physics made discoveries that have led to amazing discoveries and then to new technologies. Physicists invented the medical imaging equipment that allows a doctor to look inside a body and figure out what is wrong. Many owe their lives to this technology. In fact, physicists invented, directly or indirectly, almost all the advanced technology we commonly use today. Our computers have parts invented by physicists, like the silicon microchip circuitry, the magnetic hard drive and the liquid crystal display screen (LCD). So, as it turned out, uncool was actually *very* cool if you're into watching movies, surfing the Internet, gaming, texting, talking on a cell phone, driving a car flying on airplanes or getting your body a needed repair.

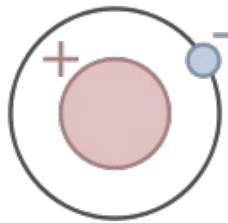
In August 2005, the director general of the Confederation of British Industry warned that the number of British students taking physics had plummeted and that Britain's economic future could be compromised unless more students were engaged in the study of physics.

Knowing physics is the key to progress. Teaching physics is the teaching of the way things really are in nature—how everything works in the universe.

The way things really are in the universe (the whole of nature)

In brief form, here's what physicists, astronomers and cosmologists have discovered about the way things really are and how everything works:

- The size of the universe is tremendous relative to the size of Earth. After it erupted/expanded, the energy of the Big Bang became particles. This energy-become-matter that was thrown out of the eruption is 13.82 billion years old and still expanding. (See <http://home.web.cern.ch/about/physics/early-universe>)
- The Big Bang *likely* started as super-dense, extremely hot expansion from a spot in space. This hot energy cooled and became photons (particles of light), and other tiny particles called *quarks* and *neutrinos*. These highly energetic particles grouped together to form larger particles called *protons*, *neutrons* and *electrons*, which then group together to form *atoms*, which often group together to form molecules. These molecules on Earth group together to form DNA molecules and then biological cells, the basic component of living things. This reality is strange, but testable and now knowable
- The most basic element in chemistry (and the universe) is hydrogen. This is the primary atom, the building block of the universe, first generated in the cooling after the very hot Big Bang. Hydrogen is the simplest form of matter and the lightest. It's the stuff from which all heavier elements get made by the process of atomic fusion in stars, star explosions and star core collisions
- Simple hydrogen, called *protium*, has one proton, no neutron and one orbiting electron. Add a neutron and it is called *deuterium*. Add a second, extra neutron and it's called *tritium*, but still hydrogen. It won't take a third unless it gets another proton and electron. Then it becomes the element *helium*



Protium (1 electron & 1 proton) the most basic form of hydrogen - Wikimedia

- Our star, the Sun, is composed of hydrogen and helium and other elements. Its tremendous gravity fuses its hydrogen atoms together making helium atoms. Heat and light are byproducts. This process is called *nucleosynthesis*, the joining of the nucleus (the center) of one atom with that of another into a larger, heavier atom. (See <http://apod.nasa.gov/apod/ap130426.html>) A star will eventually burn and compress its helium into heavier elements (carbon, neon, oxygen, silicon) until the element *iron* is formed. To this point the fusing process has been releasing energy. Now the process of making heavier iron will require the absorption of energy. Once the core contains enough iron, the fusion stops. Iron is a form of matter that does not fuse into heavier elements easily. With no expansion from new core heat to balance against the force of collapse from its own massive gravity, the star's core shrinks. Suddenly the core is crushed under the gravity raising the temperature quickly to over 100 billion degrees. A sudden recoil expansion develops. The building shock waves blow the star's outer layers away. This big, final explosion is called a supernova. For about 30 of our days, the light from a distant exploding star will burn brighter than a whole galaxy of billions of stable stars. In the hot

chaos of the enormous explosion, many heavier-than-iron atoms are also suddenly fused together. The remnants of the star have become all the elements that are found on Earth and every other thing in space like dust and gas clouds, and chunks like asteroids, comets and planets. Comets are mostly composed of leftover, unburned hydrogen from the surface of the star and newly-made oxygen from the star's explosion. They bonded quickly in a ratio of 2:1 in the heat to form water (H₂O), condensed on rocky dust, then turned to ice in cold space. The icy, rocky dust formed most of Earth's oceans when the Earth formed from asteroids. Fascinatingly, the Journal of The Geochemical Society and The Meteoritical Society (June 2009), reported that rocky meteors vaporizing in Earth's atmosphere, daily, yield 12% hydrogen and oxygen gases that combine to make water (H₂O) as steam. Earth gets a some new water from vaporized meteors (and volcanoes)!

- Adding a second proton and neutron another orbiting electron suddenly makes *helium*, a gas that we use to fill balloons that are lighter than air. Add a third proton, neutron, electron combination and you have *lithium*, a light metal. (See https://www.nasa.gov/pdf/190387main_Cosmic_Elements.pdf) Adding a fourth proton, neutron and electron makes *beryllium*, a super-light, super-strong metal. Add a fifth of each and you have *boron*, a white solid sometimes used in soap as borax. It's also used in solar panels to make electricity from sunlight. Six make *carbon*, a black solid (charcoal), which, curiously, is the main ingredient (after water) in life forms like us because it has 4 bonding sites for other elements to make complex molecules. Seven make *nitrogen*, another gas, which makes up about 78% of Earth's atmosphere. Eight make *oxygen*, which pairs up (O₂) to make the gas we need to breathe (21% of Earth's atmosphere). Algae and plants' green leaves take carbon dioxide out of the air, remove the carbon to build their structure and give off the oxygen (O₂). Skipping forward, 30 make *zinc*, 79 make *gold*, and 92 make *uranium*



Expensive and rare (on Earth) neutron star [collison](#) debris - Wikimedia

- Only 88 of these chemical *elements* occur naturally on Earth. The heaviest is radioactive *uranium*. Depleted uranium (DU) was used in American tank rounds during the Gulf War. It penetrates heavy armor. (Elements 43, 61, 85 and 87 are unstable and not present)
- Molten metals swirl around in the hot core of the Earth in currents. The friction of iron atoms rubbing against each other creates the Earth's magnetic field (magnetosphere). This is an electromagnetic current that exits at the North Pole and flows back into the South Pole, high over the curvature of the Earth. It allows your compass to point to the North Pole. It also causes the auroras. (See http://en.wikipedia.org/wiki/File:Polarlicht_2.jpg) Most importantly, Earth's magnetic field

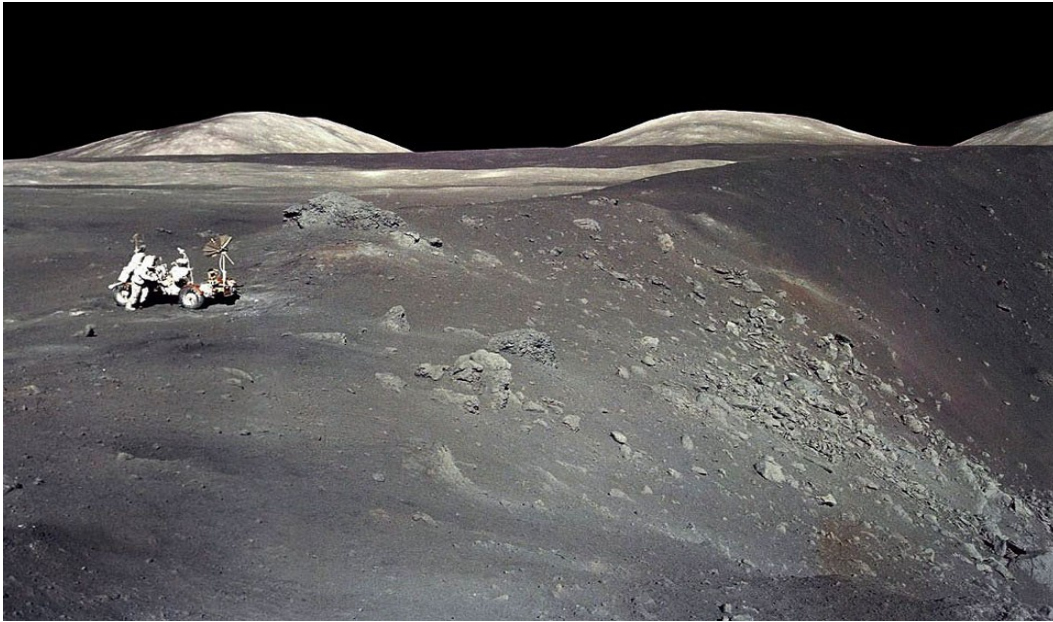
shields our atmosphere from being blown out into space by the sun's wind of ionized particles

- Some of the elements naturally bond to others to form simple or complex compounds and become things like water (two hydrogen atoms and one oxygen atom), breathable oxygen (two oxygen atoms), red dirt (iron, oxygen, and silicon), salt (sodium and chlorine), and many others
- Four forces make everything work and hold together: 1) gravity—which holds the particles of planets and stars together and which keeps us and everything on the surface of a rotating planet from flying out into space, 2) electromagnetism (electricity and magnetism), which allow these letters to appear on your screen, or a compass to point north, or radio and television signals to work, 3) the strong force—which holds together protons and neutrons, and 4) the weak force—which enables the smallest sub-atomic particles and antiparticles to change into each other, as needed to fix imbalances
- Clouds of dust and gases are groupings of the chemical elements whose composition is found by spectrographic photography across vast expanses of space. These large groupings either have enough mass to eventually come together (via gravity) as a star, *or* the gravity of a near-by galaxy captures them, making the debris field denser, eventually compressing it so dense that stars are formed. Stars exhaust their hydrogen fuel compressing it into iron and either collapse or suddenly explode. Those that explode spew out the heavier elements from the compression of the explosion. Jumbo stars that still have enough core left to keep collapsing become ultra-dense black holes, neutron stars, or white dwarf stars (See http://en.wikipedia.org/wiki/Gravitational_collapse)

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Note: *Examine any rock. All of it is made from the debris of an exploding star and consists of many elements locked together by shared electron paths. More? Try this:*

<https://www.youtube.com/watch?v=uXOQZl3J5v4>
.....

- Dark energy is the new name for the top *suspect* on cosmologists' *Most Wanted List* that is expected to show what is driving the *accelerating* expansion behavior of the universe
- Dark matter makes up some of the mass of the universe (27%). We can't see it but it's been calculated in computer modeling. (See <https://phys.org/news/2020-09-dark.html>)
- Does life (self replicators) exist elsewhere in the universe? It's probable. Lifeforms on Earth are built of carbon chemistry. Silicon-based life forms exist elsewhere
- Future discoveries about the nature of the universe are going to get stranger relative to the biblical model of creation. An example of this is that physicists have made properties leap from one atom to another without using any physical connection. They have teleported *quantum information* between distant locations. This achievement will lead to fast, quantum computers (See <https://www.nature.com/articles/s42254-023-00588-x>) This is not supernatural. It's a newly-discovered, preexisting capability of nature that we want to fully understand and utilize.
- Every spiral galaxy has a black hole with immense gravity at its center. The black hole draws in drifting clouds of hydrogen gas that become more stars, so the center of each galaxy glows from the concentration of stars. Some galaxies are close enough to each other that they eventually collide and their black holes merge. But even galaxies eventually die from being swallowed by their black holes.



Geologist Harrison Schmitt on the Moon, 1972 - NASA photo

Only science takes us to the heavens

Moses, Jesus or Mohamed never walked on the Moon and likely had no idea of what the Moon is made and why it moves across our sky. (Like my Mexican friend.) But geologist Harrison Schmitt found out a lot about the Moon. He brought back 242 pounds of it in 1972 on the Apollo 17 mission.

We cannot fault Moses, Jesus or Mohamed for not knowing about the composition of the Moon, planets, comets, stars and galaxies. They had no telescopes or microscopes. They lived in a primitive time. They had no rockets or landing modules. They didn't have the scientific method to move their understanding forward rapidly like we do today. Critical thinking about cause and effect in nature had not yet begun to be applied in their time. Scientists would come later from a larger, more investigative, and more peaceful population of humans. Moses, Jesus and Mohamed only had a tribal, mythical understanding from the ignorant, brutal cultures in which they were born and struggled. Imagine how different human history would have been if someone could have given Moses, Jesus and Mohamed a telescope and a microscope for a present, or a trip to the Moon and back.

Believers say that their god is "the same yesterday, today and forever," but only the laws of physics are the same yesterday, today and *possibly* forever. They're called *The Physical Constants*. (See http://goldbook.iupac.org/list_goldbook_phys_constants_defs.html)

Is that all there is?

Is there nothing other than physical things? Is there nothing *spiritual* in the universe? Need to feel warm but science-based materialism feels cold?

People have varying (often vague) meanings for the word *spiritual*. It can mean anything from feeling awestruck watching a lightning storm to rolling on the floor and "speaking in tongues" in a Pentecostal revival meeting; from looking down on the Earth from a spacecraft to being dressed all in white going through a Mormon temple ceremony; from standing atop Mt. Everest to praying in the Grand Mosque in Mecca, Saudi Arabia; from bathing in the sacred Ganges River to flying in a wing suit off a high mountain in Norway.

The dictionary definition of the word *spiritual* simply says, “*pertaining to the spirit or the supernatural.*” But that definition is based on two false assumptions, that a spirit is a real thing and that anything can operate supernaturally. Our current, emotionally-warm, feel-good definition of *spiritual* has drifted far from the original meaning of the word, *very* far!

The root of the word comes from the Latin word *spiritus*, meaning *breath*. In other words, if you are not breathing, you are not *spiritual*.

Almost every friend I have wants there to be something special after death for him or her. Each wants to *believe* that they will have a youthful, eternal, slender, spiritual body that is well-dressed in a happy, dignified, and well-provisioned afterlife. (Your white clothes never need washing, your teeth are perfect, and all the people are above average.)

From the time we are young children, these two ideas—of a having an eternal spirit and an eternally happy afterlife in paradise—get implanted deep into our thinking by religion and movies. (See <https://i.ytimg.com/vi/zj5F7MbenjY/maxresdefault.jpg>)

Are these two concepts, of having a spirit and an eternal afterlife, dominating your thinking? You think about your death don't you? Non-existence is not an imaginable conclusion for your life. The idea of living forever in another realm in a raised-from-the-dead state feels so familiar, so warm and fuzzy, and so much better than *nothing*. Yet, at the same time, you know that you didn't invent this afterlife idea. The afterlife idea is not the original idea of anyone alive today. It has been around for 3,000 years or longer and may have first applied only to the ancient pharaohs of Egypt, not to the common people. So then are you *hosting* this idea, invented by a primitive culture, an idea that morphed and got embellished over time just like all folktales and myths?

If the idea about having an eternal soul and then dying into a lovely afterlife to live forever in heaven with mint-fresh breath is not correct, do you still want to keep that idea just because it used to make you feel good? Tony fearfully said, “Yes! Bullshit is better than finding out that there's nothing.” Tony was raised in a sky god religion (Catholic).



The Ascension, (Jesus with a Catholic flag and 7-foot tall apostles) by Dosso Dossi - Wikimedia

10. Bodies & More Bodies

I was created without my own permission.

—C.S. Lewis

Survival is insufficient.

—The Borg, 7-of-9

Survival

Nearly 100% of parents feed, clothe and protect their infant children.

Simple survival for most lifeforms means to be able to eat, grow and to stay alive long enough to create and raise offspring. In some species, especially mammals, the parents must provision the young offspring. Human parents provision their children with food, clothes, shelter, education and money.

But all life forms have extremely short lives relative to geological time, measured in millions of years. Some insects have lives lasting only hours. Some plants have lives lasting thousands of years, like Giant Sequoia trees, Great Basin Bristle Cone pines trees and Mojave Desert creosote bushes.

The surprising thing is that all life forms, including us, the animals and even the long-lived plants, are *not* what is doing the ultimate, long-long term surviving! Something else far, far smaller has been using the bodies of lifeforms to propel itself into the future, and has been doing this for the last 3.2 billion years on Earth.

Do you really know *what* you are?

*Dear God, I read the Bible. What does beget mean? Nobody at church will tell me.
Love, Katie.*

You and I and all the animals, insects, trees, plants and all the microorganisms are *bodies*. Bodies are assembled from the parents' DNA code. Bodies have a primary function: survival. Survival has a single goal: the reproduction of more bodies. In mammals (humans are mammals), conception goes on inside the female bodies after the injection of half of the future body's DNA by a male. The egg contains the other half strand. The two half strands zip together. Massive chemical (protein) construction then begins in the female.

Each half strand of DNA consists of groups of assembly instructions called genes. Genes even have optional genes, which are slight variations in the genetic code called *alleles*. They may or may not be randomly, mechanically selected in conception. They are alternative forms of genes at any point on the DNA chain.

The female's eggs were made during her development inside *her* mother. Each egg contains only half strands of her long, genetic code, her DNA. They also carry many alternates (alleles). Likewise, inside the testes of the male, half strands of his DNA are assembled and wound tight inside the heads of swimming sperm cells. Sperm cells are made in adult males daily and by the billions, as needed in inventory. They also carry many alternates (alleles) of the father's genetic code.

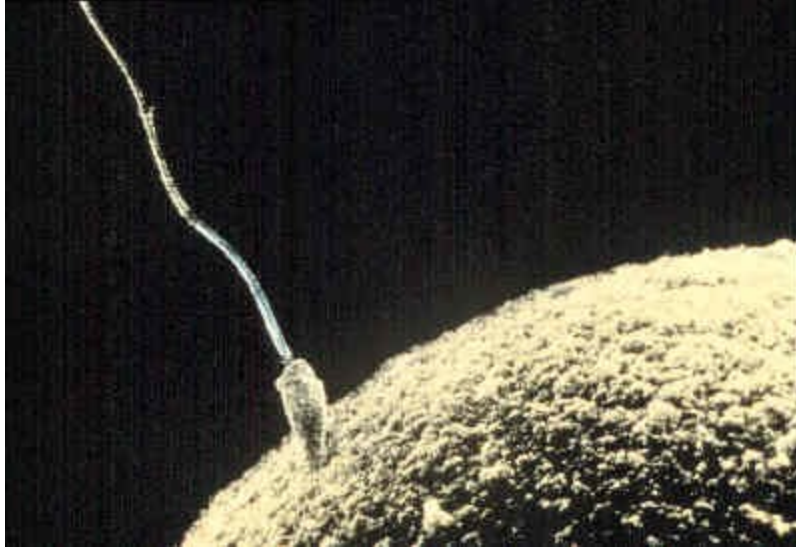
Alleles make siblings each different, even though they have the same parents. Given enough generations, and lots of breeding back in, some alleles become common in a population. This can produce a *race* of people, a sub-group with common features different

from those of other sub-groups. Nevertheless, all sub-groups of humans can still interbreed. We're all close or distant cousins who can mix our bloodlines (DNA) in new offspring.

When the two half strands of DNA meet inside the egg (conception), RNA molecules, act as copy machines. They copy each half strand of DNA while a DNA "clamp" zips the half strands together to form a new, complete DNA molecule. That contains the instructions to form the new human body. Our genetic code is three billion chemical letters long. From these instructions, a new body is built to become the next generation of carrier and breeder for our genes.

So then, which one is the *primary* actor on this planet, them or us? Is it the genes, or is it the bodies walking around that they manufactured that keep the genes' existence going?

Genes are the primary actors! We are just their armament and propagation machinery. This realization can rock your view of reality. This is bio-reality.



First sperm cell to the egg trying to get in - Wikimedia

Inside the impregnated egg, the two half-strands of DNA are zipped together. The two strands become one complete strand of fully operational DNA. (See page 71) This gets copied by RNA molecules that go to work producing proteins in just the right amounts, shapes and types for the building of all the different body parts needed. This is a purely mechanical process. If the process fails at any major stage, the female's body may shut it down and induce abortion (miscarriage).

The fertilized egg floats out of the Fallopian tube and implants itself in the blood that lines the uterus. Later, it draws nutrients from the mother's bloodstream in a developing connection called the placenta via the umbilical cord. The mother's body donates huge resources in energy and in chemical nutrients (food) to the new organism's growth and defense, building it to the mature fetus stage. The fetus grows surrounded by a tough membrane sack of water (amniotic fluid) as it gets larger. The water protects the fetus from being dented, damaged or broken easily.

The sex organ of the developing fetus starts as a sex bump called the *genital tubercle*. This begins genderless, even though the gender of the fetus was chemically determined at conception by the chromosomes in the sperm cell. If the fetus has the XX combination, the sex bump draws inward and develops into ovaries, Fallopian tubes, uterus, vagina, clitoris, with labia minora and majora externally. If the fetus has the XY combination, the sex bump extends to form a scrotum with testicles, the penis and the glans outwardly. Nipples form on the chest of a fetus before the sex bump morphs into male or female genitalia, so even though males have no need of them for milk production, males are born with nipples!

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Note: *Who sequenced this male nipple code into our DNA? Males who call themselves biblical, intelligent design creationists should ponder that their god gave each of them nipples that don't work. They should ask themselves, "Why are nipples on our chests examples of such unintelligent design?"*
.....

The parents

Ideally, both the female and the male, whose genes the fetus carries, aid the growing fetus. The male protects and provisions the female while the female protects her abdomen, her own safety and her health. Her body assembles the fetus via chemical processes from her intake of food and drinking H₂O.

When the fetus matures it becomes a viable human and is propelled out of the female by the biochemical releases of hormones into the mother's blood stream for the involuntary contractions of the uterus, even for temporary super-elasticity of the flesh around the labia to try to prevent serious tearing when the baby must exit.

After the baby is born, the placenta separates from the uterus and is expelled from the mother. The extremely tough, umbilical cord, connecting the baby to the placenta is either cut short, or in many cultures worldwide, allowed to dry until it breaks off leaving a navel. We each carry the "belly button" evidence that we are placental mammals.

The baby human is born with an oral reflex for sucking and draws colostrum (pre-milk containing immune system enhancing biochemicals) from the mother's mammary glands' ducts through her two nipples. A few days after breastfeeding is begun, the flow of colostrum ceases and milk, containing growth nutrients, is produced by the mammary glands. The human baby consumes it and grows rapidly. In fact, neonatologists (baby doctors) suggest exclusive breast-feeding for the first six months of a baby's life. In the wild, it was often a three-year process. Breastfeeding results in temporary infertility for the mother so that her body's chemistry and energy go to the newborn, not a new fetus.

The mother's colostrum and milk contain biochemicals that protect infants from bacterial and viral infections and from food allergies later in life. Studies show that infants who are not fed breast milk are at increased risk for recurrent ear infections, severe diarrhea, and respiratory diseases. And all this evolved as optimization.

For years, the male and female parents continue to protect their baby at almost all costs to themselves. In other words, the parents are extended armament for the new body, the child.

The brain, with its experience of pleasure during sex, is also part of the complex machinery for the creation of new bodies. The pleasure can be intense. Life has gotten very sexy for us, hence, sexy advertising and pornography.

Our genes, in a simple trial-and-error methodology, have crafted all of these things and these processes, even our complex emotions. But all species continue to be slowly changed by this genetic trial-and-error process without any thought, without any creator other than the laws of chemical bonding. The better trial-and-error changes gave us our form, cognition and abilities that let us survive and breed better. That's the totality of what we are: successful lifeforms.

If one has superior armament—anything beneficial from a quicker brain to better eyes to stronger bones to a better immune system—and then breeds, the future bodies may also be enhanced. One's mate's genes may reduce or add to the offspring's superior armament. Good breeding means choosing wisely to high-grade the genes. If one's mate has *inferior* armament and breeds, then the offspring are weakened, perhaps so weak that they often die out before they breed.

Superior armament

Just what exactly constitutes *superior armament* changes according to the conditions of the niches lifeforms have to grow and breed in before death. If one random mutation produces a trait that gets reinforced because the offspring with it didn't die before breeding, then this trait begins to spread in future generations. If those with this trait also leave more descendants, then this trait will spread faster and will be common in future generations.

Individual bodies are created and spent in this biological process of reproduction. This allows the genes to have future bodies that can survive to replicate them under a variety of changing conditions. Conditions can change fast if a new plague develops. (See <http://www.nature.com/ncomms/2015/150630/ncomms8487/full/ncomms8487.html>)

Conditions can change slowly as droughts happen, as some food sources become scarce, as weather patterns shift, affecting how plants, animals and humans live. The genes have made endless variations of themselves, like hedged bets. So how is that going for the genes at the expense of the bodies they make? The genes have perpetual life in one form or another, even after a massive meteor strike kills off all the dinosaurs and most other life. (See <https://www.newyorker.com/magazine/2019/04/08/the-day-the-dinosaurs-died>)

“Why do people grow old and die?”

"Life is hard. After all, it kills you," said actress Katharine Hepburn.

Our genes gain no benefit by having our bodies live to be 900 years old. We probably would have been killed by predators, plagues or random accidents long before reaching even 300 years. So, our genes have built into us the chemistry to allow us to live just long enough to reproduce, raise our young and maybe to help in raising grandchildren. Our bodies simply degrade and start to fail after 60+ years. Why? Lifeforms only exist to reproduce. This is the game of chemistry as biology. Reproduction is the core function. All other biological functions (breathing, thinking, digestion, excretion) exist only to support reproduction.

Get it?

“A myth is a narrative that is both old and widespread,” says Richard Pocklington. Every primitive culture had a creation myth. The one most of us were raised to believe was the 2,650-year-old, Hebrew creation myth in the *Book of Genesis*. It has grown to be a mega myth that believers now insist is true. But *genetics*, not The *Book of Genesis*, is the real story of life. The idea of Eve's fabrication from Adam's rib is a mythical story from a primitive, pre-scientific culture. Any two people named Adam and Eve from thousands of years ago were each made inside a female body where sperm met egg, where a male's half strand of DNA met a female's half strand of DNA and were combined. This chemistry assembles a child from proteins inside the female. And where do the parents get the proteins to generate this new life? From eating other bodies made by genes: plants and animals, including their flesh, seeds, milk and eggs. It's barbaric, and also the only way mammalian life works.

A sudden awakening to the true nature of life

As a body, you only focus on what you are, what you can see, and what you want. Ah! But this is your reality *only* until you look through a microscope at your own blood and begin to realize that you are constructed of particles (cells) manufactured by your genes according to what works *for them*. You didn't build your genes. They built you. You are a slight variation in their long ancestry. It's a run-away system that is super simple in its purpose. In other words, rote chemistry has generated all living things on Earth. It just took 4.5 billion Earth years of compounding complexity (known as *emergence*). No creator, just chemistry!

Variations on the norm

Some people don't reproduce because they want a career or solitude. Some don't want more people on the planet. These ideas override their genetic programming. It becomes the end of their genes. Mission not accomplished.

Other things happen randomly. Women get raped and birth the child. Some males accidentally produce a child that they never find out about because their female partner never told them. Many males who donate to sperm banks have children who they never meet.

Changing of the guard

Wildest yet, RNA and DNA have outdone themselves in making us. Soon the genes will no longer be in charge of us. *We* will be in charge of *them*.

Natural selection was nature's way of making improvements. We invented the artificial selection of genes when we figured out how to breed desirable characteristics into plants, livestock and pets. But now, we humans can access our own DNA to make minor adjustments. Some time in the next 100 years or less, humans will take charge of our own evolution at the level of DNA.

The bacterium *Deinococcus radiodurans* has a gene that allows it to repair its own DNA in less than 24 hours. By introducing this gene into humans, we may be able to slow aging instead of wearing out or being overrun by cancer. There is also the new science of *epigenetics*, changes in cells caused by the activation and deactivation of genes. How does it work? (See <http://www.livescience.com/7736-epigenetics-revolutionary-humans-work.html>)

To many, this sounds like the world's most dangerous idea, playing god. But the world's most dangerous ideas all have to do with things that kill people, like racism, ethnic cleansing and wars of religious fundamentalism. Genetic engineering, ethically done, will help people. ("Is it good for all concerned?")

For breeders

What if you're young, ready to reproduce and raise good offspring? You've searched for a good looking mate (with superior genes) in bars, restaurants and maybe in various universities' biology and physics departments. Nevertheless, sadly, you've come up with nothing. But because you are a rational thinker, you also want a mate who is going to be loyal, not divorce you, remarry, and have your kids raised part time by someone else in your role. So, where can you find a loyal mate and life partner? At a university? Perhaps.

It doesn't always work out, but many people shop for a quality breeding partner in churches. That's why many young people initially join churches, to find a *presumably loyal, faithful* breeding partner who will be a good parent! Nature made sex fun to insure success. (See <http://www.ehbonline.org/article/S1090-5138%2808%2900042-1/abstract>)

How much of your rational mind would you have to give up to be part of a belief system just to find a loyal breeding partner? What kind of supernatural stories would you have to believe or pretend to believe to score? Is there an inherent, genetic defect in even choosing such a partner as the future parent of your offspring? Well, yes. Having a partner who demanded belief in irrational, supernatural stories from ancient scriptures would indicate an irrational person susceptible to ideology and not capable of self-correcting or altering course when presented with new, accurate information. This is a weakness, not a beneficial survival trait. And what about the kids? Would they have strong and rational thought processes that would allow them to survive, thrive and also find superior mates if they are programmed with supernatural religious beliefs by one parent? They might convert to a sillier religion or even become celibate priests or nuns (which is geno-cide).

Having children

As far as Mother Nature is concerned, we each have only one reason for existing: to make more bodies for the genes to improve so that they have better bodies in which to travel forward in time perpetually. This is how we all got here, even though we think we are just minds, egos, identities and free will. Nevertheless, you came into existence because of the genes, because every last one of your ancestors made children who survived diseases and challenges bettering the survivability of the bloodline (gene line).

You can break your long line by not having children. Deciding not to reproduce kills part of the continuation of 13.82 billion years of top evolution in this universe, especially if you are highly intelligent and highly educated. In fact, highly educated people in the west are now the least likely to have multiple offspring while the superstitious, constantly warring, religious masses are the most likely to have many. This does not bode well for humanity. Hence, the best thing fertile people can do for the future of humankind is to get an advanced education *and* have multiple children. (Or, in the alternative, adopt kids.)

What about overpopulation? Anyone can breed, but it's not popular with those in academia and many in high-status jobs who are under reproducing. The idea of encouraging the breeding of the most intelligent humans is offensive to some. It seems like racism and eugenics to them. But any perceived offense is wholly irrelevant considering the need. The need for intelligent people to multiply is paramount. Making the world a better place requires making healthier, more intelligent people each generation—lots of them—and then investing time, love, training and money in them. (See <http://news.yahoo.com/meaning-life-babies-105800066.html>)

Parenthood comes with a high cost, but family is the great reward. The challenge is to be a better parent than yours were for you. It's the ultimate form of *paying it forward*. (See http://en.wikipedia.org/wiki/Pay_it_forward)

“I don’t understand evolution and I don’t want to.”

“You people are so wrong. I feel sorry for you rejecting God and the gospel and siding with Satan. God created you and all the things in this world and you reject Him. The Bible says so. I believe it and it's the truth. You people will get your reward at the judgment day and be sent to Hell. I wouldn't want to be you!” said an aged, Protestant believer in Arizona.

“Grandpa, we love you, but we are working on [astrophysics](#) instead of mysticism,” said his granddaughter in Tucson.

Serious fairy tales are compelling especially when they have long ago become comfortable and when one is of the age when life is short and death is scary and imminent. But all one has to do to see this fellow's worldview as non-compliant with reality is to switch the word “God” to “My special daddy in the sky.” Try it. If you're a hardcore believer, this technique will unhypnotize you. The absurdity of a Sky Daddy belief suddenly becomes painfully obvious, then liberating. After all, we were each born non-theists. Parents and/or the dominant culture we were born into injected us with such a supernatural belief. It's okay to reject it and get your rational life back. It's exhilarating.

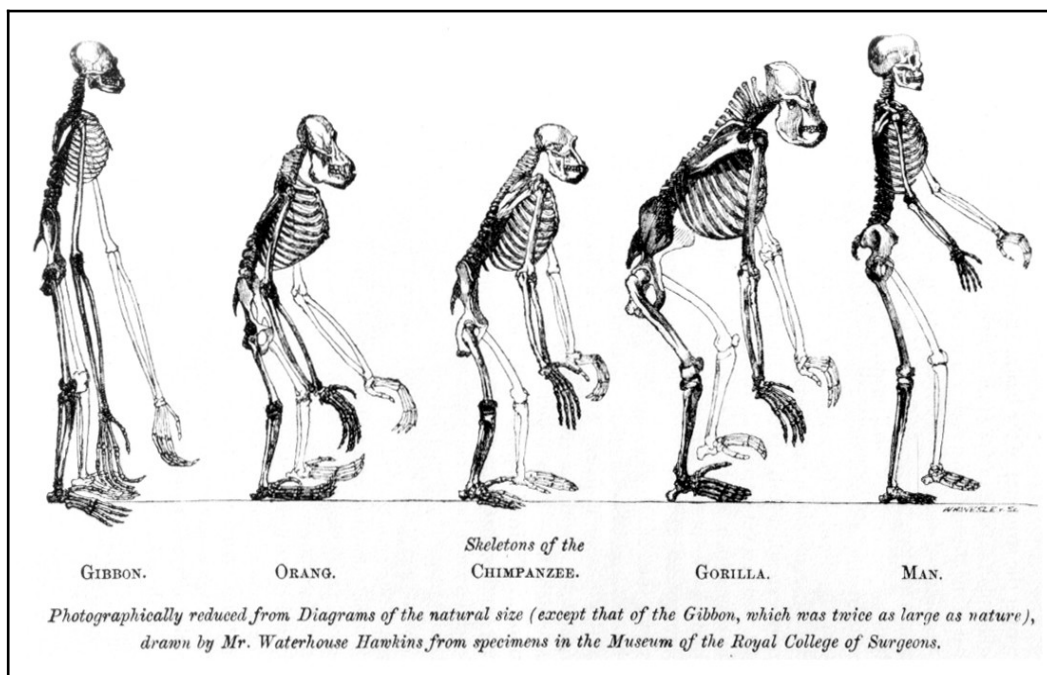
11. Evolution Confirmed

*The truth that makes men free is for the most part
the truth men prefer not to hear.*

—Herbert Agar

*All truth passes through three stages.
First, it is ridiculed. Second, it is violently opposed.
Third, it is accepted as being self-evident.*

—Arthur Schopenhauer



A Gibbon and the four Great Apes—Wikimedia

What theory?

Scientists may be the world's worst public relations officers. Scientists' technospeak keeps the untrained masses from understanding them. Meanwhile, religious leaders become effective, anti-science propagandists using familiar Bible-speak. Preachers do a thunderous job of refuting science, which works on the masses who continue to believe impossible, supernatural stories.

To make matters worse, scientists call their finest work on human origin a *theory of evolution*. To the scientists, *theory* means a tested understanding about an aspect of nature. However, to the religious masses this *theory* means a stupid, evil *guess* that insults their idea of a sacred, omnipotent, vengeful creator.

The believers who ridicule the idea of evolution are blinded by their ideology. Most of

their educated children will come to understand the verified information about evolution. Why? Biological evolution is not a guess. It explains life in fine detail. (See <http://www.talkorigins.org/faqs/faq-intro-to-biology.html>)

“Ain’t no such thing as evil-ution!” said an elderly churchgoer

There are three microscopic organisms that live in us that can hijack our bodies and multiply very fast. They are viruses, bacteria and fungi.

How about a really scary lab experiment at home? Prove evolution to yourself, and then share your test results with believers for peer review.

The hypothesis: You can evolve the DNA of foot fungi rapidly to breed a super strain with superior survival characteristics. This is evolution at work fast!

The prediction: The fungi will change according to the environment you force them to live in. Those few with the random survival traits for the new environment will reproduce. Their offspring will have their traits or die. Each generation will continually get stronger in the environment. After a few months and many hundreds of generations of the fungus, all the survivors will thrive. Their population will increase in the poisoned environment.

First test procedure: Walk barefoot through different wet locker rooms and showers every day for a week. Don’t dry your feet. Put on shoes immediately every time. Sleep with your shoes on for this entire week so your feet don’t dry. You have created the perfect, warm, humid environment for common foot fungi to take hold and reproduce rapidly. You just made your feet into “fungus heaven.”

Second test procedure: Go to the drug store and get the best over-the-counter foot fungus medication (fungus poison) you can find. Apply it to your feet according to the product’s directions. Discontinue according to the directions.

Third test procedure: Keep your feet in shoes where they remain warm and humid day and night while using the medication.

First test observation: The fungi die back to a low level. It's survival of only the fittest. But after a few weeks, your fungal infection returns.

Second and third test observations: Repeating the treatment with the original medication only slightly diminishes the colony of fungus living in your feet. Only the weakest will die. It's more survival of the fittest. After repeating the treatment many times, according to the instructions on the medication, you no longer get relief and the infection gets even worse when you stop the treatments.

Conclusion: You forced a situation where only a few, tough survivors could multiply. You bred a much stronger, slightly different fungus.

State your theory: A few of the original organisms with accidental (random) resistance that allowed them to live in a medicated environment will be the only ones that reproduce. Almost every survivor in each generation will pass those traits on to their offspring. Soon only those with the superior genes will survive in the environment of the medication (poison).

Peer review: Share your experiment with your friends. Have them repeat the experiment to see if they get the same results and draw the same conclusion. (Then give them distilled vinegar to soak their feet in as an acidic disinfectant.)

What did you prove with the fungus? You proved that evolution is not a stupid guess. It's an irrefutable fact that survivors in changing environments pass on their superior genes. This is how biology works. These facts about evolution are observed, retested and used daily by many people worldwide working with DNA. It's just not in the ancient tribes’ scriptures. It's newer information, fact checked and re-verified.

We can see changes and adaptations in generations of bacteria, and viruses also. Like fungi, they adapt to drugs that used to kill most of their ancestors. After thousands of generations adapting to a wide variety of threatening factors, the survivors get tough and prolific. But even potent radiation from far-away exploding stars cause mutations in DNA that may lead to unexpected changes in lifeforms (including fungi) over time.

Random happens and compensation happens at every level. Still, religious creationists insist that evolution is not fact, that it's a mere *theory*. Really what they mean to say is that they want the concept of evolution to be viewed as a mere, unproven *hypothesis*.

A hypothesis is an educated guess at what's real. It precedes a full theory. A theory has had tests applied to the original hypothesis to get down to verifiable reality about some aspect of nature. The laws of nature have been discovered little by little by experimenters with a hypothesis and tests. Their peers then run the same tests and further investigate it. They try to find any and all flaws in the hypotheses and the tests. If the hypothesis withstands testing by others it becomes a theory. No incorrect hypothesis is left standing for long. Science also constantly revisits all previous theories, honing them for accuracy or throwing them out if they can be proven incorrect. Unlike in religion, you won't be killed for blasphemy by a mob of scientists for finding something wrong in science.

Perfect design

The fungus experiment is an example of *micro evolution*, change within a species. Radical changes in the living environment over millions of generations have altered most lifeforms. This means that if living things have to adapt to changes continually, they will change in function and form from their ancient ancestors. Slowly and eventually mutations that are life-enhancing add up to *macro evolution*—changes in kind!—new species from DNA changes over eons of time. (See <https://www.youtube.com/watch?v=2oKlKmrblOu>) But biblical absolutists demand that true belief in *The Book of Genesis* requires that the Earth is only 6,000 years old and that their god made every kind of living creature and set their genetic code as fixed. They reject the concept of *geologic time*, the understanding that billions of years have passed with all *kinds* of changes in geology and biology on the Earth.

Evangelicals not only claim that the *Book of Genesis* is factual. They also insist that humans were created by their god in his image and that the design is perfect. Perfect?

Design Flaw in Humans

/

Our Correction

1. Limited vision / Glasses, contact lenses, LASIK surgery, microscopes, telescopes
2. Body odor / Deodorant, perfume, soap, showers, baths, saunas
3. Programmed to enjoy battle yet continue living uninjured / Spectator sports
4. Can't run easily with external organs / Sports bras, athletic supporters
5. Orgasm need resulting in expensive children / Birth control methods
6. Can't sustain running or carry heavy loads / Bikes, cars, trucks, trains
7. Fragile, limited feet / Shoes, boots, swim fins, snowshoes, skis
8. Mental depression / Social events, humor, drugs, light therapy
9. Vestigial animal hair / Razors, scissors, combs, wax, ties, electrolysis
10. Bad memory & loss of information / Pens, paper, cameras, computers
11. Baby's head (big brain) too big for birthing / Caesarian section surgery

12. Fear of death / Make-believe afterlife

13. Bad teeth / Dentistry and orthodontics

14. Born clueless & raised to believe ancient, tall tales / Science education

Vegetarian Jurassic Park

Evangelicals also insist that the *Book of Genesis* is an *eyewitness account* of the creation of the universe, the Earth and all living things. But they have their own creation chronology wrong. According to the *Bible*, Adam was the first human that had eyes to witness anything. But he wasn't the first thing created in the account, so he missed being an eyewitness to the biblical version of the creation of the stars and Earth. (Oops.) Nor did he have equipment to record anything he witnessed. Adam didn't *write* Moses' *Book of Genesis*. But Moses is spoken of in the third person in Genesis, so who really wrote this book of creation that claims to be an eye witness account? An unknown author(s), later.

In late May, 2007 two evangelical men opened a \$27 million Bible-based Creation Museum in Kentucky. Their museum doesn't tell the sequence of geology and biology on Earth. The Creation Museum tells a story of Earth's history based on what it must have been like if the Genesis story in the *Bible* were correct and accurate. (See <http://creationmuseum.org>) Displays inside the museum depict the Earth as being only 6,000+ years old. But apparently others didn't like the museum deliberately telling such an incorrect story. On the museum's opening day, an airplane circled overhead pulling a banner that said, "Thou Shalt Not Lie," one of the Bible's Ten Commandments.

The museum's dinosaur models and special effects presentations tell a convincing story to those who just accept the *Bible* story as real. One display shows dinosaurs aboard Noah's Ark. No dinosaurs are mentioned in Genesis, yet the display claims that all the dinosaurs were vegetarians until the first sin in the Garden of Eden. The first sin in the biblical account is by a woman named Eve eating a forbidden fruit. Because she sinned, some of the dinosaurs suddenly started killing and eating flesh, according to the museum's explanation. One wonders how Adam and Eve survived to procreate with flesh eating dinosaurs chasing them. In the 1950s, Christians denied dinosaurs ever existed.

In parts of Africa, Indonesia and India, tigers still attack and eat people. House cats kill mice and birds. Some dogs want to kill and eat the cat. The infection you get in a cut is bacteria trying to eat you alive. Each needs a meal at another's expense or it dies.

The Catholic priest and scientist, Francisco Alaya, told a Vatican conference, "The design of organisms is not what would be expected from an intelligent engineer [god] . . . Defects, dysfunctions, oddities, waste and cruelty pervade the living world."

Nature runs red with blood. Living things have to eat other living things to survive, to grow to sexual maturity to make more copies of themselves. DNA recycles DNA to make more DNA with a few changes. That's *life*.

Culture war: Creationism vs. The Proven Truth

In early 2008, the National Academy of Sciences and the Institute of Medicine released a new book, *Science, Evolution, and Creationism*. Their objective was to keep the teaching of biology and block the teaching of creationism in U.S. public schools. Politically powerful Evangelicals want biblical creationism taught in schools. They want fantasy theology not realistic science. (See http://www.huffingtonpost.com/2014/07/22/ken-ham-aliens-go-to-hell_n_5608368.html) All theology is fantasy, so much ado about a pretend god.

The pocket watch that assembled itself in a tumbler

The Principia Cybernetica Web states the common objection to evolution as, "...most people find it difficult to imagine how the intrinsically 'dumb' process of blind variation [in DNA] can give rise to intelligent, apparently purposeful systems, such as organisms, minds or societies."

Since William Paley in 1802, creationists argue that a complex human, with parts as specialized and finely tuned as the eye, could no more have evolved from a primordial slime on the early Earth than a finely operating pocket watch could have assembled itself from a churning mess of metal and glass fragments in a tumbler. Many Christians buy into this *highly* flawed analogy and cite it in arguing against the teaching of evolution. The huge flaw in their analogy is that on the level of atoms and molecules, assembly is entirely different for a living product of biology, like an eye, than it is for an inanimate metal and glass, which come from mining. Living things came from chemical changes in nature called evolution. (See <https://around.uoregon.edu/content/ancient-fossils-reveal-fresh-clues-about-early-life-land>)

Biochemicals *can* and *do* change rapidly. Inorganic chemicals in the form of non-living chunks of metal and glass that make up a pocket watch cannot change by themselves, except to corrode (oxidize). A pocket watch didn't go through changes of DNA for billions of year to eventually become a pocket watch. The eyes on living things, including humans, did.

Quadrillions of biochemical changes over 4 billion years on Earth, affected by heat, cold, supernova radiation, acids, bases, enzymes and natural chemical catalysts, mechanically built and assembled trillions of biological forms. This happened with no one ordering it. It is a system that refines itself by random mutation and death or survival. Each creature is a community of previously-mutant, surviving replicators. A pocket watch is not. It cannot reproduce itself. Humans are not made of pocket watch metals and glass. We copulate to reproduce. Pocket watches can't even wind each other.

Religion began as incorrect assumptions about nature with supernatural explanations. Today Evangelicals and Islamists reject science because its discoveries threaten their supernatural creation story, the validity of their worldview and thereby the religion's income and especially the religious leaders' absolute control of their loyal people.

Believers see their scriptures as a manual for what their imagined god wants. Conversely, science writes the manual of nature from studying everything. Benefits result. If you are dying of scurvy, the *Bible* cannot tell you how to save yourself from the disease. But scientific experimenters found that scurvy is caused by a Vitamin C deficiency. Eating oranges, limes or lemons is a cure.

The *Bible* is a collection of tribal fictions, behavior laws and punishments, supernatural claims, war stories and group identity stories. One thing is certain, the *Bible* *has* changed. Its moral code changed. From Moses to Jesus the morality advanced from vengeance to forgiveness. (But Islam is still stuck in primitive, tribal vengeance. "An eye for an eye. A tooth for a tooth.")

Totally depressed?

Were you shocked and depressed to consider yourself a product of mechanical genes and not a loving father in heaven with super powers (Sky Daddy)? We are always shocked the first time real understanding bursts our old, incorrect ideas.

Biology is a marvelous form of purely mechanical, consistent, low-level *logic* that has been running random experiments inside itself for four billion years on Earth. It does so without a central brain controlling the experiments. Instead it happens mechanically because it can within the laws of physics. It unconsciously builds and diversifies itself on previous, survival successes until those successes are so numerous that all kinds of replicators (creatures) exist today. It's an inside job. But small incremental change means that often nothing looks much different in just the next generation.

Stacy's mom?

Layne was 50 years old when he returned to his hometown in central California for a visit. He had once dated a girl in high school named Stacy. (Not their real names.) He was in a supermarket when he spotted the mother of the girl he had dated in high school, 33 years before. She hardly looked a day older! He went up to her and excitedly asked, "Excuse me, but aren't you Stacy's mom?"

Fully recognizing him, the woman got a disgusted look on her face and answered, "Layne, I *am* Stacy." Oops!

Genes make excellent copies of themselves, sometimes with most of the visible traits of a single parent passed on in their next generation.

And of course, not being cautious and not questioning one's own assumptions cause almost all big errors we humans make. This is why using critical thinking skills is so valuable to us. Caution and accuracy are better than embarrassing naiveté.

Counter intuitive

The purely mechanical method of evolution seems wild, random, reckless, crude and disheartening. It seems wildly impossible upon first hearing it. It's completely counter-intuitive to us when we were raised on a mythical, magical creation story as absolute truth with threats of eternal punishment for not believing it all 100 percent. Hearing the opposite—the facts about biological evolution—can cause us to experience a *primal terror* that it might be true. The terror is caused by the old, warm, secure but incorrect ideas leaving us.

It would be so childishly easy to just throw up our hands and say, "God created Adam from dirt and Eve from Adam's rib in one day." But we know from physics, chemistry and rational thinking that this idea is incorrect. We don't trace ourselves back 6,000 years to a first man and woman created in a day by a master magician and rib transplant surgeon. We trace ourselves back in the chemistry of our genes, which continue evolving. (See <http://www.livescience.com/609-hundreds-human-genes-evolving.html>).

Life

We are composed of chemical elements that are star ejecta. We came from a long, long series of chemical formations that led to RNA molecules, then DNA molecules. These chemicals produced the first replicators (lifeforms) on Earth over four billion years ago that led to us and all the extreme variety of things alive today.

After Darwin, scientists thought that life began in the chemical factory of the early ocean around hot mineral water vents or in hot, ancient tide pools. The deep-sea hot springs exude rich, inorganic chemicals that can combine to form amino acids and then nucleic acids, like RNA and DNA. But the clay particles in this water bind up many of the needed chemicals thus preventing further combinations, so scientists were compelled to do more chemical detective work.

Deep space harbors carbon-based molecules, the precursors of replicator molecules. Radiation from stars forms them from the readily available atoms. Amino acids, the precursors to proteins and enzymes, also form in deep space and can be found inside frozen comets. Since amino acids form the basis of life, and since comets pelted the early Earth, it's probable that these amino acids caused bacterial life to start in the warm waters of the early, volcanic Earth. Porous mineral debris from volcanoes (pumice) floating in seawater and struck by lightning can also form organic molecules.

The toughest survivor & replicator

Extraterrestrial bacteria are another possibility. There's evidence of early bacteria fossilized in rock on Mars. Geologists have found Martian rock on Earth. Bacteria may have

evolved from amino acids on early, wet Mars first. Through collisions with comets or asteroids these bacteria-laden, Martian rocks were ejected and pelted the early Earth. But no one thought bacteria could survive the radiation in space. Then a strange bacterium was discovered growing in food that had been highly irradiated to kill bacteria. Its name again is *D. radiodurans*.

Among its characteristics, *D. radiodurans* is highly resistant to all the usual killers. It is resistant to gene-toxic chemicals, to damage from oxygen, as well as to damage from high levels of ionizing radiation, ultraviolet radiation, and even dehydration. It repairs its damaged genes within hours. This makes it a top candidate in the search for the beginning of life on Earth. Any bacteria tough enough to travel through space in comets could seed wet planets with its DNA. Over eons, with mutations building on mutations, lifeforms become numerous. (See <http://phys.org/news/2015-03-chemists-riddle-life-began-earth.html>) Chemical replicators may be inevitable on any warm, wet planet. (See <http://bigpicturescience.org/episodes/is-life-inevitable>)

“Is God choosing our DNA?” asked a New Age woman

The answer to her question is simply, “Chemistry is choosing our DNA.” Chemical bonds built lifeforms up randomly on planet Earth. DNA came about by the patterns for chemical bonding within the laws of physics. DNA continues to exist by traveling through time in the bodies it makes to recombine itself. From replicating chemistry all the lifeforms came into existence and continue to be slowly, randomly refined. There’s no mystery to it anymore. Microscopes have revealed it. There’s no ghost secretly choosing your DNA.

Would you equally suspect a god’s influence when your uncoiled, iron, bicycle chain gets oxidized, structurally weakened with flaking scales of rust, and then breaks apart? Rust happens because of the physical affinity of oxygen to bond with iron, creating weak, crumbly iron oxide (rust). People *only* exist because of the laws of chemical bonds forming between elements also. Very little would exist without those laws of chemical bonds. So you can answer your own question by answering this one. “Is God personally choosing rust for this chain?” So what we need to do is to stop asking “Who done it?” Ask “What did it?” and “How does that work?” instead. There’s no “who.” Nature is just building blocks, everywhere! Biology is self-building blocks everywhere! Ask “HOW” and you’re on the path to truth.

Tony, an ex-Catholic, read this and remarked:

...I am having a very hard time wrapping my mind around it because our beliefs about God, soul, etc. seem diametrically opposed. Call it primal terror that you might be right, call it whatever you like. In fairness, this has nothing to do with the content [of this book] or even its validity, and everything to do with me.

The primal terror reflex comes from religious programming. Remember when you experienced another form of *idea terror* when you learned from the older boys or girls that there was no Santa Claus. You didn’t believe it at first. You were appalled or stunned. You wanted to keep believing in Santa Claus and that he was supernatural, watching you remotely, hoping that you’ll be good and remain worthy, planning to reward you with toys again next Christmas.

This exactly parallels the believers’ model of reality from the god myth in the Abrahamic religions: “God is watching us. He knows our thoughts and hears our prayers,” they say, “to determine if we are worthy to be rewarded in heaven.” This is another contagious idea. It spreads some paranoia because you feel that you are being watched 24/7. No one would ever think this concept could possibly be real if parents, priests, preachers and even movies had not led us to *believe* it was real when we were young and easily indoctrinated. It’s a crazy model of reality. How crazy? Many mentally ill people express their psychosis as delusional religious claims and rants, occasionally with weapons (See <https://www.yahoo.com/news/alleged-capitol-gunman-larry-dawson-criminal-history-221535917.html>)

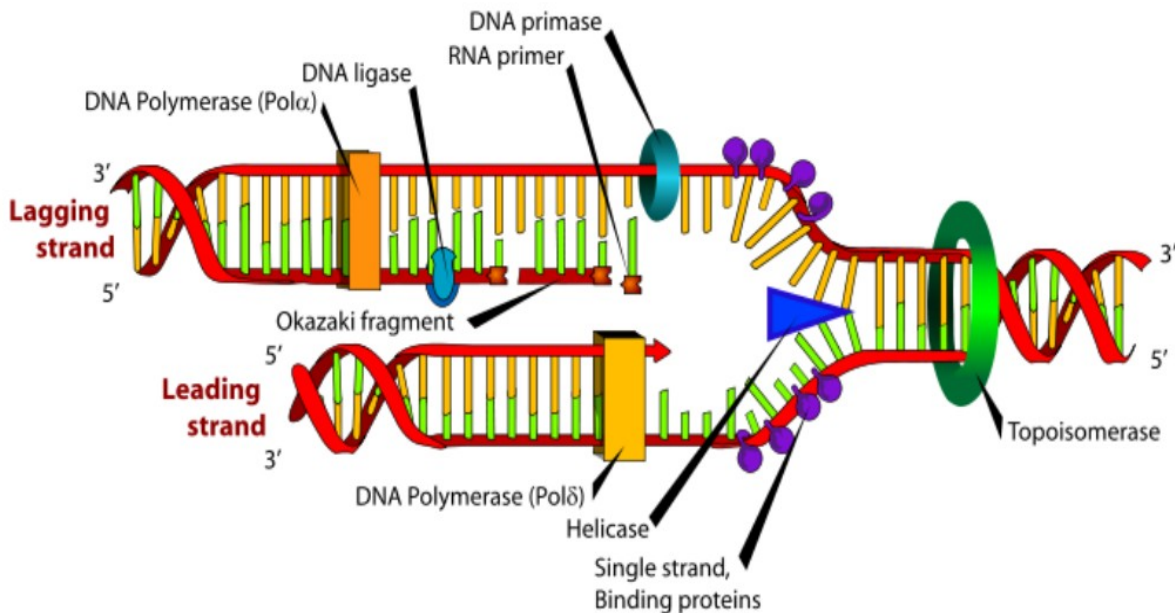
Natural selection

Evolution requires genetic variation, which results from changes within a gene pool, the genetic make-up of a specific population. A gene pool is the combination of all the alleles—alternative forms of a genetic locus [locations on DNA molecules]—for all traits that population may exhibit. Changes in a gene pool can result from mutation—variation within a particular gene—or from changes in gene frequency—the proportion of an allele in a given population.

—National Center for Biotechnology Information

One kind of large dragon fly hatches by the millions in mid-June, along the banks of a river. They fly around and eat for a month. They get eaten by the hundreds of thousands by fish, bats and birds. The survivors grow quickly. They copulate, lay eggs and then die en masse in just a few days. Their bodies pile up in stacks a foot high at the base of trees along the river after the orgy.

TED Talk presenter, Susan Blackmore, said that Charles Darwin's explanation for all the related forms of life on Earth has been called *the best discovery and realization that anybody ever had*. Here it is: "If there are creatures that vary slightly from one another, but many or most die before they reproduce, then the survivors pass on to their offspring whatever genetic trait it was that helped them survive." This is the nature of evolution, the process called natural selection. It operates on the level of DNA molecules. (See <https://www.bbc.com/ideas/videos/is-darwinism-the-best-idea-anyone-has-ever-had/p06nkffw?playlist=the-a-z-of-isms>)



DNA replication - Wikimedia

(See the video: <http://www.youtube.com/watch?v=OjPcT1uUZiE>)

Wrapped around tiny protein spools called nucleosomes inside all living cells, the double strands of spiral DNA are made of alternating sugar and phosphate molecules. These are cross-linked by double molecule combinations called base pairs. These base pairs function as four chemical information gates for building more cells. These four are named *adenine*, *thymine*, *cytosine* and *guanine*. Adenine bonds only with thymine. Cytosine bonds only with guanine.

There are approximately 2.9 billion base pairs in the human genome (human DNA) that are bonded together in a long chain of 24 distinct groupings called chromosomes. The DNA clamp (an enzyme) encircles the separation point between the two strands controlling the process like a zipper on a long track.

Let's go cosmic and elemental: Only the four lightest elements resulted from the Big Bang, so all the chemical elements heavier than beryllium (#4) were created in star explosions. Then, of what elements are these four genetic, information molecules made?

Adenine: Five atoms of carbon, five atoms of hydrogen, and five atoms of nitrogen.

Thymine: Five atoms of carbon, six atoms of hydrogen, two atoms of nitrogen and two atoms of oxygen.

Cytosine: Four atoms of carbon, five atoms of hydrogen, three atoms of nitrogen and one atom of oxygen.

Guanine: Five atoms of carbon, five atoms of hydrogen, five atoms of nitrogen and one atom of oxygen.

This chemical building system manufactures self-reproducing cells. This system built us and keeps us operating as bodies. Symbiotically, we humans have already built a parallel to this system. We invented microcircuits and put them on silicon chips to make computers. In less than 20 years, we have become highly dependent on our computers to regulate many aspects of our lives on Earth.

Parallel to DNA with its four chemical components, our computer processor chips use a long series of microcircuits with four types of electrical gates to process information and display results. Each gate has two incoming connections and one outgoing connection. The outgoing connection only releases electrical current if the incoming connections received a certain pattern of electrical current, depending on which of four gates it came from. These four information gates have been named *Or*, *Nor*, *And*, *Not (also called XOR)*.

Since electricity flows at nearly 186,000 miles per second, millions of silicon-based gates can work together in far less than one second. (See <http://www.explainthatstuff.com/calculators.html>)

DNA is like a highly complex series of information gates, 2.9 billion genes long, for the assembly of proteins to make *us*. The assembly moves much slower than electricity. It moves at the speed of messenger RNA, about 9 months to assemble a human infant from the parents' microscopic half strands of DNA.

Pastor Thomas Condon & Cardinal Paul Poupard

Evolution has been fiercely ridiculed for over a century by fearful Christians in America. They were admonished early by one of their own ministers not to do that. He tried to help them understand without fear.

"Evolution was simply God's method of working, and therefore not atheistic or infidel...The Church has nothing to fear from uncovering the truth," said Reverend Thomas Condon in 1872, after exploring the John Day Fossil Beds in central Oregon. He uncovered numerous early, strange and now-extinct tree, plant and skeleton fossils from millions of years ago. The proof of evolution was suddenly all around him on the ground to pick up and examine.

Rejected by his congregation, Condon went on to a career in science, becoming a professor of geology at the newly-founded University of Oregon.

The creation story in the *Book of Genesis* was the accepted model of reality for Americans in 1872. Million year-old fossils represented fearful information. The religious people ridiculed the whole concept of evolution only because it threatened their old and familiar Bible story.

Religion is self-sealing, not self-correcting. Once their thinking is trapped behind the seal, few believers are able or willing to escape. However, facts are now poised to overwhelm their religion's model of our origin. We are in the late part of the second stage of change where believers are verbally, violently opposing the the teaching of biological evolution via natural selection.

This will transition into the final phase where evolution is seen as self-evident because it is all around us and in us. This is already starting to show, as Seventh-day Adventist television preachers now openly admit that they accept "micro-evolution" (genetic changes within a species), but not yet "macro-evolution" (new species emergence from accumulated genetic changes).

Vatican Cardinal Paul Poupard said, "But we also know the dangers of a religion that severs its links with reason and becomes prey to fundamentalism. The faithful have the obligation to listen to that which secular modern science has to offer..."

Some others have gone further, cast off all belief in supernatural miracles and afterlives, yet kept the personally beneficial values of their former religion. (See https://en.wikipedia.org/wiki/Religious_views_of_Thomas_Jefferson)

Jesus without religion

A woman called a radio talk show and said, "I'm a Christian atheist." The talk show host was dumbfounded for an awkward, few seconds (dead air). Then he asked her how that could be. She replied, "I don't believe in any god, but Jesus is my king." She explained that she lived by Jesus' ethical teachings in order to live her life the best. This is [new](#) to most religious believers who have only known morality and religion bundled together as if they were inseparable. This woman has found a way to keep the life-enhancing ethics of Jesus without having to live in a supernatural fiction and science-oppressing, religious environment. She can have the best of Jesus, Darwin and Einstein in harmony.

"There ain't no monkeys in *my* family tree! Sorry 'bout *yours*," said a Baptist dude

Our closest, animal relatives are chimpanzees and bonobos. We have 98% of the same genes. (See <http://www.bbc.com/news/health-32452250>) "There's no part of the human brain that isn't present in the monkey brain," observes biologist Frans de Waal. Our genes built our brains and predispose us to certain behaviors. The same is true for the apes and monkeys. But not all behavior is learned. Some is genetically built in as instincts.

In a study at the Yerkes National Primate Research Center in Atlanta, Georgia, chimpanzees were isolated in pairs to see their response when one received a better reward than the other for doing the same job given them by the researchers. When the two chimpanzees had not spent much time in the same social group, the chimp that was rewarded unfairly, with cucumbers, not grapes, refused to do any further work for the researchers. But when two knew each other well from being in the same social group for a long period of time, the unfair reward was usually tolerated.

Humans behave in a nearly identical way. We rarely have any objection when the one receiving a large reward is from our close family (closely related genes). However, we fight for job promotions and more income against those who aren't, especially those who are least like us.

Upset chimpanzees often scream, move about violently and fling things, even their excrement, to get attention, to make demands, or in retaliation for an unfairness. We human apes have been known to do the same if highly stressed.

Islamist prisoners in Guantanamo threw their urine and excrement at their military jailers. Angry young males still occasionally deface public restroom walls with smeared excrement. They did so at our school for at-risk and criminal teens. An angry middle-age woman in an upper-middle class neighborhood in the small town of Phoenix, Oregon

admitted to throwing dog excrement into a neighbor's yard because the neighbor's bright light shined into her house nightly. A man on trial for kidnapping, robbery and home invasion in San Diego smeared his public defender lawyer with feces in the courtroom and threw the rest at the jury.

In a cleaner fashion, political candidates, presidents and prime ministers occasionally rage against opponents or the leaders of other countries. Religious preachers fling fiery, scriptural quotes and condemnations from the pulpit, on radio and television. But unlike the chimpanzees, humans can go a step further. Humans can get artificially excited, claiming unfairness, blasphemy and disrespect for their beliefs. That energizes their group to unify and fight. They might come after you for not being them.

Evolution isn't very fast or smart

More facts about our bodies that show a creator didn't design us:

- Vestigial, animal ear muscles to move our ears in the direction of threats
- Vestigial, tiny uterus in human males hangs off the prostate gland (See <http://www.livescience.com/7613-origin-sex-pinned.html>)
- Because of vestigial, inoperative, milk glands in males, breast cancer also occurs in men! (See <https://www.cancer.org/cancer/types/breast-cancer-in-men/about.html>)

Sexy

Is evolution sexy? Evolution is where sex comes from. (See http://en.wikipedia.org/wiki/Evolution_of_sexual_reproduction#The_two-fold_cost_of_sex)

When did sex begin? (See <https://www.nature.com/scitable/topicpage/sexual-reproduction-and-the-evolution-of-sex-824/>)

Self-esteem after understanding evolution

Many Christians, especially their leaders, have reacted in disgust to the idea that we humans are descended from earlier, primitive lifeforms in a cascade of variety, much of which is extinct now. (For the map of this tree of life, see <http://www.evogeneao.com/>)

Evolution seems a massive insult to religion believers' self-esteem. They think their "self" is first and foremost a "believer." How does one get beyond this identity error?

That we know of so far, we are the most intelligent and inventive product of chemistry in our solar system and possibly in the entire galaxy. Humans alone have the brains for understanding the mechanics of nature. Our closest chimp relatives do not. That realization should enhance the self-esteem of anyone who feels that science reduces us to mere animals.

Still not good enough? Then consider this: After 3.5 billion years of evolving biology one little planet within a collection of planets revolving around the Sun, we are here with our highly evolved brains exploring everything in the grand universe. We simply call this exploration *science*. And there will be much more. In just a few more years, humans will begin to genetically and mechanically engineer and enhance ourselves. We will take control of our own evolution. We may even make faster-than-light ships to travel to habitable planets. (See <http://nasawatch.com/archives/2012/09/warp-drive-rese.html>)

What? You still don't want to be seen peeling a banana in public? You want the *Bible* story instead of science? You want the Bible's Book of Genesis taught instead of the real story brought to us by science? Well, the *Bible* didn't give us plans to build any awesome machines, science did. So if you're going to be an all-out Bible believer, you have to reject all science and technology and live like Jesus and the biblical Hebrews of 2,000 years ago. That means no air conditioned churches. Brick huts. No suits and ties. Sack cloth robes. No sports. Scriptures. No cell phone. Praying. No cars. Donkeys. No grocery shopping or

restaurants. Goat butchering. No cheating! Meanwhile, the rest of us are going ahead with science and technology, solving nature's biggest mysteries. (See http://web.hep.uiuc.edu/atlas/index_ux15.html) You're invited to quit the nonsense of religion and come join us in the accurate understanding of nature. (The reason for this book!)

Religion brainwashes you to *believe* that you are special, elite, one of a god's chosen group. Your enemies are defined for you in the group. The enemy is us, the outsiders. But we are not your enemy. We are just like you. (Check out <http://www.filmsforaction.org/watch/you-are-me-2016/>)

Typically, each religious group thinks the others are not just wrong, but weird. Comically, what happens when one escapes the brainwashing of a devout religion? "I guess everyone from a cult probably thinks theirs wasn't 'as bad' as everyone else's. Only outsiders can see the especially crazy stuff because the people who left the religion are still mostly used to how it worked," said C.A., an ex-Mormon, after hearing an ex-Scientologist's story.

12. Inside Nature

The entire point of science is to bring ever deeper and subtler aspects of reality to recognition in our consciousness.

—George Wald



Frozen water floating on liquid water, Point Barrow, Alaska – the author

Precious information

There was a much sought-after, ever-so-kind professor of biology at Harvard University. During his career, he won the Nobel Prize in biology for his discovery of the function of vitamin A in eyes. At the end of his career he wrote a fascinating paper titled, *The Cosmology of Life and Mind*. It's the story behind all existence known as *the fine-tuning of the physical constants*. Here it is paraphrased.

Mass

A proton or neutron in the nucleus (center) of an atom has about 1,900 times the mass of an electron. Nearly the entire mass of each atom is in its nucleus. This maintains the atom's position and keeps it from wobbling wildly as the electrons whirl around the nucleus at the speed of light.

That is the only reason why anything in this universe remains in place. It's the only reason that matter has solid structures, fixed shapes and fits together. The great difference in mass between the protons and neutrons in the nucleus of atoms and the smaller, lighter electrons orbiting around them is one of the necessary conditions for life.

Electric Charge

How can it be that particles, so completely different in size and subatomic particle composition, as a proton and an electron, have electric charges that are exactly equal? (A proton is exactly as positive-charged as an electron is negative-charged. If the proton and

electron were to differ in charge by even a tiny difference, all the matter in the universe would be charged, and would repel all the other matter. All atoms would simply push outward into the universe, having no relationships or interactions between them. Any difference in electric charge between the proton and the electron would completely overwhelm the force of gravity. There would be no galaxies, no stars, no planets, and no life on Earth!

The Elements

Of the 94 naturally-occurring chemical elements on planet Earth, the bulk of living cells is made of just four, Hydrogen (H), carbon (C), nitrogen (N), and oxygen (O). Those four elements possess wholly unique bonding properties, exactly the properties that living things need to form.

One of these four elements, hydrogen, also makes up most of the fuel in our star, the Sun. The energy release in the Sun generates light and heat that bathe our planet, speeding up chemistry which generates life. (See Appendix F.)

Water

The absolute most important grouping of elements for life to exist is two hydrogen (H) atoms and one oxygen (O) atom. This makes one molecule of *water*, life's liquid.

Water is the strangest molecule in all of chemistry. Its strangest property is that ice floats. It's doubtful that life could exist without this condition. Ordinarily, when every other liquid freezes, it shrinks. So does water when it cools. But then, just four degrees centigrade from turning to ice, it switches and expands so quickly that the ice it forms is lighter than water and floats. (See <http://ed.ted.com/lessons/why-does-ice-float-in-water-george-zaidan-and-charles-morton>) If ice were contracted water instead of expanded water, it would be heavier than the surrounding water and would constantly be sinking to the bottom as it formed. The freezing-over of lakes and oceans during winter or during an ice age would be a freezing-under, until all bodies of water were completely frozen, killing the lifeforms in them. A large mass of ice takes very long to melt. Because ice floats on the surface of bodies of water, the sun and warming air can heat and melt it far easier than if it were at the bottom of the body of water. Under the thick skin of ice at the surface, many forms of life, both animal and plant, survive their winter until the weather warms and the ice melts. If ice did not float, it would be almost impossible for any life to survive if a big freeze occurred even once in a million years. That would be enough to block the rise of life, and to kill any life already developed.

Cosmic Principle

Two great and opposite forces motivate this universe: 1) the force of expansion and scattering, powered by the Big Bang (accelerated by background "dark energy"), and 2) the force of attraction and compression powered by gravity.

If the force of expansion were just a little greater, all the atoms would have gone on separately into space. There would be no groupings of matter, like galaxies, stars and planets, or, no *place* for life. However, if gravity had been just a bit stronger, it would have dominated the expansion produced by the Big Bang. All groupings in the universe would have been attracted to each other quickly in a universal collapse. This would have created a condition with no *time* for life.

The forces of expansion and attraction might have taken on any other values. But they are in a delicate balance. The universe is expanding without restraint, but the force of gravity holds galaxies, stars and solar systems together. It's the perfect balance between constant expansion of the whole universe and its local stability that provides an immense amount of time and an almost infinite number of sites for life to develop.

The Problem of Consciousness

Wald notes that biologists observe consciousness to be an aspect of life. They feel that they should know all about it and be able to tell physicists. But they can't find its center anywhere in the brain. Yet, a major concept of quantum mechanics in physics is that the observer affects his observations; that the act of observation may modify the path of subatomic particles. Mostly, this idea excites New Agers because they crave *divine magic* in their worldview. But there's nothing magical about consciousness. "Consciousness is a self-organized, emergent property of billions of neurons firing [electrons] in patterns," said Michael Shermer. The brain is highly complex, a fleshy, super computer that is self-aware. ("I think about myself, therefore I am consciousness.")

Beyond atheism

Rational scientists often label themselves atheists. But religionists have been programmed to *revile* atheists. Even worse, the same scientists have not widely publicized the facts about the physical constants for fear that religionists would make egotistical claims that their god made the physical constants perfect, just for humans.

The physical constants are what cause matter to exist in our universe. "...the unavoidable question about physics is, where do the laws come from?" asks physicist Gregory Benford. Another physicist, Max Tegmark points out that the universe is mathematical. So where does the math come from?

Cosmologist Stephen Hawking points out that there are no reasons why multiple universes are not continuously being sprouted like bubbles. At least one (ours) randomly got physical constants that inadvertently produced lifeforms.

Raised in a Jewish family, Nobel Laureate Dr. George Wald pondered these ideas and studied nature. He also ended up describing existence with a term from Hinduism: "Brahman thinks a universe and does so in cycles, time without end." But that view gives the universe yet another human quality of "thinking." It's much more skeptically honest to say, "Something may generate random universes infinitely." That *something* might be *random quantum states* that are also subject to the survival of the fittest. And here we are!

More ideal conditions on our "Goldilocks" planet

Earth is at just the right distance from its star not to burn up and not to freeze solid. Liquid H₂O is abundant. Lifeforms first developed in water.

Most space rocks burn up on entry into Earth's atmosphere. This saves Earth from more frequent disasters and loss of life from impacting meteors.

Earth has a powerful electromagnetic field around it because of its electricity-inducing, molten, iron core. This field prevents radiation from the sun and supernovae from sweeping away the atmosphere and bombarding living things, disrupting DNA and eliminating all life on the surface. Earth is also located in an arm of our galaxy where star collisions are rare. There was *time* for lifeforms to slowly evolve on a wet planet that remained intact. Then the dinosaurs died and multi-accidentally, here we are.

"Are we just super blessed to be here?" asked an agnostic

No. None of this was custom made for us. We evolved in this niche. We are just complex, intelligent, slowly-evolving, chemical structures stuck to a planet by gravity where we run around semi-obsessed with money, politics, religion, war and sex. We're alone in the hostile expanse of space, but semi-safe on our home planet as long as we don't kill it or let a large asteroid hit it again. And here we are?

The label “atheist”

If you don't believe in Santa or the Easter Bunny do you go around depressed with guilt having to fess up to children and label yourself an *asantist* or an *abunnist*?

The labels *atheist*, *apostate* and *infidel* are just believers' code words for *not one of us*, *scoundrel*, *enemy* or worse. These are unnecessary and hazardous labels for rational people to merely accept from believers and wear like a target at the receiving end of a holier-than-thou shooting range. Besides, Christians and Jews are atheists about the god Allah and Muslims are atheists about the god Yahweh/Jehovah/Christ.

Labels? Believers are *irrationalists*, promoting supernatural explanations, end-of-the-world predictions and never allowing their convictions and assumptions to be corrected. They are absolutely right in their minds because they think “that’s the belief system we’ve always had around here.” Nothing else could be as important. Many are willing to die for it and many have.

13. Theogenesis

But just as you may have once bought a car that turned out to be a lemon, you can also acquire information that goes sour.

—Harry Browne (author of How I Found Freedom in an Unfree World)



Wikimedia

Theogenesis (the creation of god)

In the beginning was the fear. And then came the uncertainty about everything. Next came the assumptions, because the pain of uncertainty had to be eliminated. And the assumptions were without form, so statues of supernatural gods were made and prayed to, hoping for some help. Rape, murder and mayhem were reduced by the fear of what the gods would do if their laws (secretly drafted by the priests) were broken. But this caused worship to get weird and kinky. Animals and people were slaughtered as sacrifices to please these gods. But the god statues were silent and darkness covered the prospects for better lives for the worshippers. Then the statues were forbidden by law as a new attempt was made to unite the people in fear under a single, invisible, all-power, vengeful god. It worked better than using many gods because the priests had more wealth, power and control as the representatives of a supernatural authority. But the people were now enslaved and longed for a humble ruler from their own ranks. Surely their savior and liberator would come, they prayed. They are still waiting and predicting without any uncertainty, but only as long as enough of them echo each other with more words of certainty in their belief. It's a very toxic, fragile certainty.

Gods, gods & more gods

Eight thousand years ago, after the last ice age when the massive European ice sheets melted, Greece, Turkey and the Middle East were green grasslands. People began to farm the lush riverbanks. (See <http://en.wikipedia.org/wiki/%C3%87ay%C3%B6n%C3%BC>)

In these areas, centuries before monotheism, entrepreneurial priests invented dozens of gods that their tribal clientele then worshiped.

The Greeks also had dozens of gods, all interrelated in an extended noble family. One Greek god became the king of the gods, Zeus, the god of the sky, the god of heaven. Later in

Roman Latin, the name became the general word for god, *deus*. (The English words “divinity” and “divine” come from this Latin noun.)

Amurru, Anat, Asherah/Ashterah, Astarte, Baal, Dagon, El, Hasad, Mot and Yaw were all deities of the eastern Mediterranean region.

Adad, An/Anu, Anshar, Asshur, Abzu/Apsu, Enki/Ea, Enlil, Inanna/Ishtar, Kingu, Kishar, Lehm/Lahamu, Marduk, Mummu, Nabu, Nammu, Nanna/Sin, Nabu San, Ninhursag/Damkina, Ninlil, Tiamat and Utu/Shamash were all deities of Mesopotamia (Iraq). Some were fertility gods, like gods of wheat, gods of rain, gods of animal and human reproduction. Others were gods of the Moon, the Sun and gods of war, gods of thunder and the ocean, even a god of the gods, named El. (See http://ancienthistory.about.com/library/bl/bl_myth_gods_index.htm)

Two to four thousand years ago, if you were a young entrepreneur, you could probably have opened shop and earned an income as a priest of one of these gods in your village in the Middle East. Since uneducated, primitive people will believe just about anything, if you created enough enthusiasm and spun some powerful stories of miracles and supernatural powers, you could probably have created quite a small business for yourself, funded your family well and had a life of leisure with free barbecue. Your business would have been to charge a fee for saying prayers and performing slayings and burnt offerings of lambs, goats, birds or cattle to your god. People would come to you to heal their ailments, or for good luck, for rainmaking and many other issues.

A god in polytheism was never anything more than a large or small, wooden statue. You could have had one carved and painted by craftsmen in a village far away to preserve the mystique of its origin. You could claim it magically appeared at your sacred place of business!

The gods were many. People respected their favorite wooden gods and took them very seriously. They are all gone now, replaced by the worship of a single, invisible god who has many different entrepreneurs making their incomes and even piling up vast wealth as holy special agents in the god’s service.

We are all atheists about most of the gods that all the ancient tribes had and believed in. So Jews, Muslims and Christians are all *polyatheists*, denying the existence of all their distant ancestors’ gods, except one each, named Yahweh, Allah or Jehovah. But having just one god is an even bigger problem for the world. When one group has a pet supreme being who they claim is the one-and-only god and that he favors only them, other ethnic groups feel cheated and robbed of their self-esteem. To exalt themselves, they make and enhance their own god and go out conquering rivals in their god’s name. Their descendants won’t know the god was invented, but will worship it, pray to it and die for it.

Religious enterprises & the hostile takeover

3,600 years ago, Abram, later known as Abraham, was an immigrant from Ur in Sumer (southern Iraq), home of the great ziggurat (See Chapter 17). A few think he was from southern Turkey, but either way, he came from a culture that worshiped multiple gods and revered blood sacrifices to them. Mr. Abram traveled to Canaan (Palestine/Israel today) and bought land from an indigenous Canaanite. He first built an altar for blood-letting sacrifices to his god. From Abram, both the Jews and Arabs famously claim they are descended.

Much later, about 2,650 years ago, things were looking pretty good for the early Hebrews in the small city of Jerusalem. To their east, the Assyrian Empire was in the early stages of its disintegration, the Babylonian Empire had not yet risen to prominence in Mesopotamia to replace it. Egypt to their southwest was weak and still recovering from Assyrian rule. When their king Amon died, the Hebrews chose Amon’s 8-year old son to be the new king. The boy’s name was Josiah. He inherited the kingdom.

At the time, the Hebrew people of Jerusalem were worshiping at least three gods, Baal, Ashterah, and Yahweh in their temple in Jerusalem.

In early Semitic religions, Baal Hasad (the rain god) was the legendary son of El. El was the legendary, primary god of the ancient Canaanites and was considered the father god. El, in turn, was the son of the god Sky. In the legend, El castrated his father, making El the *potent* male deity. (The brutality in the culture, even between their father and son gods, is demoralizing. Brutality is still popular in Middle Eastern cultures and Islam.)

The name Baal, as a title, generally meant “the lord” or “the master.” Baal, the god, was originally the Canaanite god of fertility of the land. He may also have been the sun god of the Phoenicians. There came to be many variations of Baal across the eastern and southern Mediterranean cultures and in Mesopotamia. Each culture modified him or blended him with another legend, as they did with many of the other gods. This blending or morphing of legends is known as *syncretism*. It still goes on today in splinter religious groups, especially in newer religious groups like the Mormons and the New Age movement.

The radical believers in Yahweh defamed this god by putting his name *Baal* in front of the name of disgusting things. One was Baal Zebub. Zebub was a Hebrew word for *fly*, like the flies that live on manure. So to call a pagan god Baalzebub (Beelzebub in English) was to say that the god Baal had a pile of dung for a throne. It was quite an insult to a Baal worshipper (fighting words).

Ashterah, was a female deity, a sexy fertility figure called *The Queen of Heaven*. The zealous Hebrews renamed her Ashtoreth, a demon of lust.

Yahweh was likely Yah originally. Yah was the early Semitic god of chaos or power. Later he became known as “the lord of hosts”—the leader of an army, the soldiers' god. Yahweh's legend also gradually took on some of the attributes of El, the god of the gods. His image was minted on 4th Century BC Persian coins issued for the Province of Yehud (Judah).

But what's this? No Hebrew monotheism a thousand years *after* Abram? Right. According to the *Bible*, Abram worshiped El, not Yahweh. But El was later claimed to have been Yahweh all along, when only Yahweh worship was allowed. Here's how the scribes sanitized it to make Israelite history religiously correct at a later date: “I revealed myself to Abraham, to Isaac, and to Jacob as El Shaddai, but was not known to them by my name Yahweh.” (Exodus 6:3, Tanakh, the Hebrew Bible) El Shaddai means “El, The All Sufficient.”

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Note: Compare this to the even more sanitized version in the English Bible: “And I appeared unto Abraham, unto Isaac, and unto Jacob, by the name of God Almighty, but by my name Jehovah was I not known to them.” (Exodus 6:3, King James Version) Curiously, the goal of the King James Version was to make a Bible that was most useful to control King James' subjects so they wouldn't revert to Catholicism or Judaism. Substituting the name Jehovah for Yahweh was actually the work of William Tyndale, an English priest who created the Tyndale English translation of the Tanakh. The King James translation borrowed from Tyndale's translation. The Church of England (The Anglican Church) was created by King Henry the Eighth so he could divorce and remarry without being excommunicated by the Pope. This new church was not a product of Martin Luther's Reformation that created Protestantism. Tyndale was considered a heretic in England and in Rome for re-translating the Bible without a king's or the pope's permission. Christians, both Catholics and Protestants, burned William Tyndale alive in Belgium. However, Tyndale had introduced a number of new English terms into the Bible that stuck. (Passover, scapegoat, atonement, Jehovah, salt of the earth, a law unto themselves, the powers that be, my brother's keeper.)

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In their earlier polytheist years, the ancient Hebrews used the term *Elohim*, which meant “the gods.” They had worshiped many gods for centuries, so the three gods being worshiped in the temple in Jerusalem at the time of King Josiah represented an inventory reduction. Focusing on just one god—El—with prayers and animal sacrifices might make him deliver on requests (prayers), many thought.

We can compare this rival gods (rival commercial brands) situation in ancient Jerusalem to a city today with three rival soccer teams. Why not reduce the three to just one high quality team to take on other cities' teams and to get the local fans all cheering for (and financially supporting) just one home team. If you owned one team and had enough wealth or power, you could buy out or just eliminate the other two, take control of the sport as a monopoly and grow it bigger, especially if you used the force available to a king.

At the age of 16, the boy king Josiah decided that the war god Yahweh was his favorite god. To simplify things, flex some royal muscle and wield his command authority brutally, Josiah had his soldiers destroy the statues and worship objects of Baal and Ashterah in the temple in Jerusalem. Then he had their priests killed and the priests' bones burned on their own altars as the final burnt offering to their deposed gods. The *Old Testament* writer says that Josiah even destroyed the altars and images belonging to competing deities "in the cities of Manasseh, and Ephraim, and Simeon, as far as Naphtali..." (2 Chronicles 34:6). Now there was only one religion in his kingdom. It was the end of religious diversity in the region around Jerusalem. Monopoly. State religion.

Some anthropologists suspect that many of the books of the *Old Testament* were actually written by Josiah's scribes in order to promote the worship of Yahweh. They suspect this because none of the neighboring countries that kept written records of tribal and religious leaders, such as Assyria, Babylon and Egypt, had any records of the stories or characters listed in the *Old Testament* prior to 650 BC, the time of the reign of Josiah. Another piece of evidence is that the Jews never celebrated the Passover before the reign of Josiah. It was supposedly a celebration started during the time of Moses, hundreds of years earlier.

So did Josiah's scribes fabricate the stories from Adam to Moses to consolidate Josiah's power and influence?

In all detective work one must look to see who benefitted from what was done. It is highly probable that they fabricated much of the early *Old Testament* to focus the population on their religious franchise, to compete better with foreign religious cultures and to enhance their political control over the masses.

A sacred wall

King Herod was a later king of the Jews in Jerusalem. Nineteen years B.C., he dedicated an enlargement of King Solomon's temple for the worship of their one god. The temple was destroyed by Roman invaders less than a century later. No god came down to stop the destruction. All that remains is the western wall of the old temple. The famous western wall is known as the *Wailing Wall*. Orthodox Jews go to the remains of the wall and recite prayers, rocking forward and backward, as if crying (wailing). They yearn for a rebuilt temple on the site. But there's a big problem. There is a huge Muslim shrine and mosque built above the wall called The Dome of the Rock. There's a humorous, fictional story about the Western Wall:

A journalist heard about an old Jew who had been going to the Wailing Wall to pray, twice a day, everyday, for decades. She went to the Western Wall and found him there. She watched him pray and when he turned to leave, she approached him for an interview. "Hello. I'm from an American Christian TV network. Sir, how long have you been coming to the wall and praying?" she asked. "For about 50 years," he responded. "50 years! That's amazing! What do you pray for?" she queried. "I used to pray that the temple would be rebuilt. But now I just pray for peace between the Jews and the Muslims. I pray for all the hatred to stop and for our children to grow up in safety and friendship," he answered. "How do you feel after doing this for 50 years?" the journalist inquired. He paused then said, "Like I'm talking to a wall."

Competing confusions

Seeking to make continuity with the ancient Hebrew god, some Christians claim that Yahweh (Jehovah) was a supernatural spirit who became Jesus later.

Jews were prohibited from saying the name Yahweh, spelled as YHWH in Hebrew and called *The Tetragrammaton* by Greek scholars. Jewish high priests and scribes once changed every mention of YHWH to *Hashem* ("the name") or *Adonai* ("my lord"). That's also why the English King James version of the *Bible* often used the term *The Lord* (land owner, ruler) or *Jehova* for this ancient Jewish god's name, instead of calling the god by the banned name *Yahweh*.

Yahweh worship has morphed into many modern sects including Hassidic Judaism, Catholicism, Lutheranism, Southern Baptist evangelism, Pentecostalism, Mormonism, Seventh-day Adventist evangelism, and many more. The leaders and followers of many of these religious groups insist that their group alone has the keys to the accurate interpretation of Bible prophecies. They each believe that they are their god's special people, that their god performs magic and that the universe is a special place of his unique creation for them. (See <https://www.psychologytoday.com/us/blog/the-human-beast/201005/the-real-reason-atheists-have-higher-iqs>)

Much ado about a levitating sky god

Swiss, protestant theologian Karl Barth wrote *6 million words* in thirteen volumes about his god, whom he never claimed to have met. Irrational, closed, circular thinking would lead a team-player-believer to ask, "How could there *not* be a god when a good Christian man like Karl Barth devoted his entire life to sharing our god with us?" (See http://24.media.tumblr.com/tumblr_ld6daoYiuf1qcc4zuo1_500.gif)

Curiously, the Mormon founder, Joseph Smith, Jr., wrote far less words than Karl Barth about personally meeting the biblical, sky god and his boy *Yeshua*/Jesus, levitating above him in the sky, in the woods, in upstate New York. (See: http://en.wikipedia.org/wiki/Joseph_Smith#mediaviewer/File:Joseph_Smith_first_vision_stained_glass.jpg)

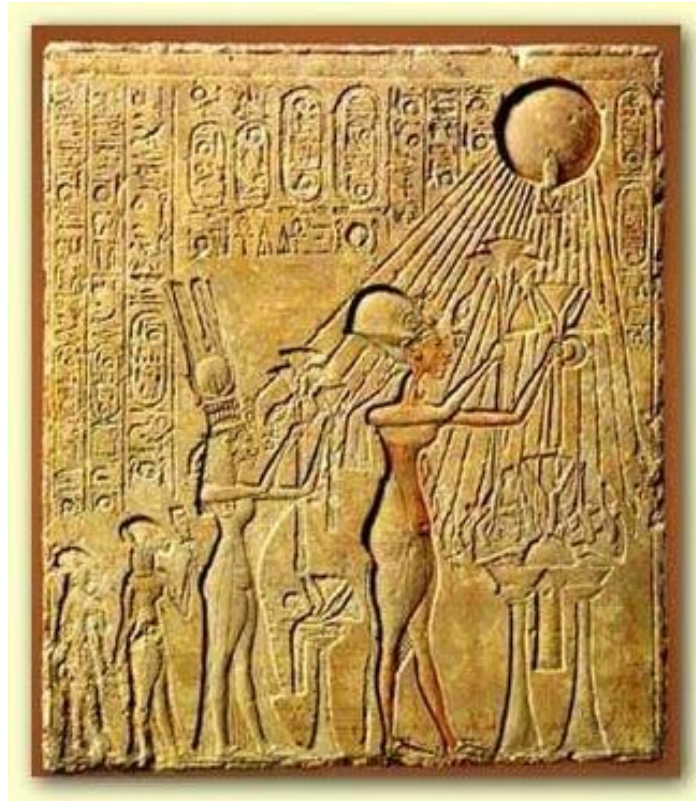
Start your own religion?

A thought experiment: If you were a psychopath out to get power, wealth and top sexual status, would you (1) start a religion, (2) run for top political office, (3) become a media celebrity or (4) start a high-profit corporation? Then, how would you go about doing that? Advertising works. It commonly and optimally involves exaggerated claims, fear mongering and energetically lying to the public with a straight face to set your hook. In the USA, the Constitution's First Amendment gives blanket protection to religion, not politicians, media celebrities or CEOs. Tough decision? Well hey, it's far easier to just be a follower in your friends' political and religious group. It's far easier to be humble and comfortable without making any waves, because, after all, you aren't a psychopath or even an anti-psychopath. Welcome back to the status quo. BUT, things get worse in the world as more psychopaths compete for the limited resources of your group's money and loyalty. So what to do to save humanity and Planet Earth? You have to be an anti-psychopath or the psychopaths run everything into complete destruction. Scorched earth.

14. The Christian Sun God

Homo religiosus (religious human)

—Karen Armstrong



Pharaoh Akhenaten and family worshipping the Sun - Wikimedia

Protected by polytheism

Were conditions safer when tribes and nations had many gods? At least no group of worshippers got so big and dogmatic that it attacked another group for worshiping and making animal sacrifices to “the wrong god.” Wars were fought to conquer others, not to slaughter them for their personal religious ideas.

The earliest monotheist

His dad, Amenhotep III, was the pharaoh of Egypt, and a worshipper of many gods. The son's name was Amenhotep IV. He invented Semitic monotheism before Moses.

The name *Amenhotep* translates to English as “Amen is Satisfied.” *Amen* was the Egyptian god of the air. Because people breathe air while alive, the Egyptians morphed Amen into the god of the breath of life.

Amenhotep IV was not satisfied with Amen, with the many gods, or with his own name. After his father’s death, in the fifth year of his reign as pharaoh, he simplified things

by proclaiming the sun god *Aten* to be the true life-giver and the only god worth worshipping. He egotistically changed his own name to *Akhenaten*, which meant “The Splendor of The Sun.” But the priests of the other gods weren’t buying it, nor were the masses. It was too much change too fast, done too gently. When Akhenaten died, his son (King Tut) inherited the kingdom and brought back the other gods. Akhenaten was remembered as a traitor. Most of his images and monuments were destroyed by the ancient Egyptian polytheists.

This was the first attempt at monotheism in the entire history of civilization. (Contemporary with Zarathustra in Persia.) It ended in 1,336 B.C., which was just a few years before Moses is claimed to have given monotheism to the Hebrews in Egypt. Both men tried to get their people to stop worshipping multiple gods and to praise only one god. For Akhenaten it was a blinding, burning orb as the Sun in the sky and for Moses a blinding, burning orb in a bush at ground level. How similar! Nearly identical. God as light.

Over a thousand years later, in the *Bible* (Matthew 17:1-3), Moses was said to have supernaturally appeared to Jesus and his disciples. These verses say that Jesus “was transfigured before them, and his face did shine as the sun...”

In later semi-religious fiction, blood-sucking devils of the night (vampires) were merely kept at bay by the sign of a Christian cross. But they were said to catch fire and be destroyed if exposed to the light of the Sun.

Fundamental theme in the second coming of Jesus

Many paintings of Jesus depict him with a glow behind his head or his entire body. In a religious publication called *Signs of the Times* (March 2007, page 43) there is a photo of a painting showing modern people in the foreground, looking up at the sky. Beams of light are shining down on them. Out of the sky come Caucasian male angels with feathered wings dressed like Roman senators. The central object is Jesus who is levitating (antigravity) in front of a gigantic Sun.

Worship day

Jesus’ and his posse observed Saturday as the day of worship. They were good Jews. So why don’t Christian groups worship on Saturday (the Jewish Sabbath)? After all, Sun Day is the day for worship of the Roman sun god *Sol Invictus* (*Invincible Sun*), who wore a crown of sun rays. On March 7, Year 321, Roman emperor Constantine set the day of Christian worship as Sunday. He wanted nothing to do with the Sabbath of the conquered Jews.

The Seventh-day (Saturday) Adventists are among the few Christians who don’t worship on the day of Constantine’s Roman sun god, yet their publications have depicted Jesus returning in an orb of light. (See <https://www.adventist.org/all-about-the-second-coming-of-jesus-christ/>)

*The Christian religion is a parody on the worship of the Sun
in which they put a man whom they call Christ in the place of the Sun and pay
him the same adoration which was originally paid to the Sun.*

—Thomas Paine (one of the founding fathers of the United States)

Why were descriptions and depictions of Jesus originally given sun symbols? Because it coaxed ordinary, highly conservative Romans, accustomed to worshipping their sun god, into more easily accepting Christianity as the new, national religion. It restored an empire-building ideology to the fallen, fragmented Roman Empire. Roman religion replaced Roman nationalism and spread to the lost Roman regions of Europe and later to the Americas. The Bishop of Rome (the Pope) ended up with more loyal subjects and wealth than the Caesars ever had! That’s the power of a highly contagious story that’s loaded with supernaturalism.

American Sun God money



Old Roman coin featuring the sun god Sol Invictus - Wikimedia



2007 Presidential \$1 Coin image from the United States Mint. The image is the statue of the Roman goddess *Libertas*, wearing the solar rays crown of the Roman sun god *Sol Invictus*, (The Statue of Liberty, a gift from Roman Catholic France to the USA), left.
1933 \$20 gold coin image with a Roman eagle flying above the Sun. "IN GOD WE TRUST" is written in the Sun's corona, right. (U.S. Mint - Public Domain)

Benjamin Franklin designed a 1787, U.S. penny

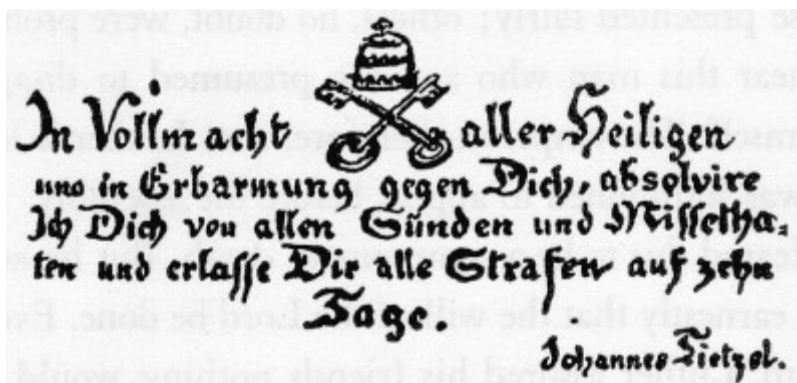


U.S. Government - Public Domain

15. Beyond Belief Systems

When the money clangs in the box, the souls spring up to heaven.

—Roman Catholic monk Johann Tetzel,
selling the forgiveness of sins (indulgences)



Receipt in German of payment for sin forgiveness – Wikimedia

Martin Luther opens the cage

Catholic priest Martin Luther rebelled against his church for selling *indulgences*, the forgiveness of sins for admission to an eternal afterlife. Sinners could buy a *Go-to-Heaven-No-Matter-What-You've-Done* card from the church. Think of it as a fundraiser. The church, at the time, was in dire need of money to finish building its headquarters in Rome and other large cathedrals. They sold what cost them nothing but paper and ink and what would sell rapidly to raise the cash.

In 1517, Martin Luther nailed his protest papers, known as his *Ninety-Five Theses*, to the wooden door of the church in Wittenberg, Germany. He was incensed by the concept of selling forgiveness. A Catholic Dominican monk, Johann Tetzel, was selling these pieces of paper in Luther's town and signing them. Without Martin Luther's rebellion against this idea, the scientific revolution would not have been able to start when it did, if at all. Science and technology today owe their very existence to Luther's act of protest. Suddenly, a new freedom to think and speak openly spread. This allowed early scientists to investigate nature. They announced their findings without being sentenced to death by the church for the crime of heresy. However, Martin Luther lived in fear and in hiding because a bounty was posted and assassins were sent from Rome to kill him. His fame grew as he escaped. Later, the Lutheran church was formed as the first alternative to the Roman Catholic Church in Europe. This move put the power of a modifiable theology in the hands of maverick leaders. (Just like in America today, where any new form of Christianity can become a business success!) The Lutheran Church became the first *protestant* (protesters') church. It was decentralized. Lavishness and the lust for wealth were not part of this new church. Humility entered. Priests became ministers, married and had children.

Curiously, the term *catholic* means *universal*. For centuries the Catholic Church had been the dominate church. With the Lutherans came change, and with change always comes variation (random evolution). From the Lutheran church came all the other splintered protestant Christian denominations (except The Church of England).

Business

Organized religion certainly has been commercial. It generates income without producing a product. It creates the need for its services and then sells its services directly to the end consumer. It seeks a membership fee, often 10% of the members' income, while charging extra for marriages and funerals.

Religions provide some charity for the poor and disabled. They also provide the food, shelter, wealth and high social status for the clergy. The large churches, as tax exempt corporations, are incorporated as perpetual financial ventures without having to pay stockholder dividends. They are often fabulously wealthy. (See Appendix K)

What is the total of all of the religious organizations' funds in all of their bank accounts worldwide? What is the value of all of their real estate worldwide? Church corporations in the U.S. are not supposed to be secretive, financial entities insulated from the citizens' overview, but many are.

'Wowing' believers

Displays of wealth impress people. Religion evolves to be more enticing which enhances the flow of money into it. Religion has generated complex and beautiful works of fiction, music, art and architecture to "wow" believers. A virulent sect evolves to keep its believers fascinated and loyal. Consider the large architecture and worship displays by believers in the Vatican in Rome, Salt Lake City in Utah, Mecca in Saudi Arabia, Amritsar and Varanasi in India and megachurches in Texas, California and other states. They all fascinate and entice people. Even a "Pentecostal" church with rock music wows believers.

Bible sez "Kill 'em."

Moses' one god idea did not wow many people until centuries later. Moses declared some very harsh, barbaric laws. Some Islamic countries still use those laws and punishments, even execution by stoning, which wows the onlookers.

Consider this fictional, silly letter. It refers to the brutal religious laws from three of the books of Moses in the *Bible*, and seeks to apply them today.

Dear Rabbi Saul,

You're one a God's chosen, so I could use some advice from you regardin' God's laws and how to follow 'em.

Leviticus 25: 44 states that I may possess slaves, both male and female, provided they are purchased from neighborin' nations. For us Americans, a fellow pastor claims this applies to Mexicans, but don't apply to Canadians. Why can't we own Canadians?

When I burn a bull on the altar as a sacrifice, I know it creates a pleasin' odor for the Lord - Lev. 1: 9. The problem is my neighbors. They claim the odor isn't pleasin' to them. Should I smack, I mean, smite 'em accordin' to the law?

I have a neighbor who insists on workin' on the Sabbath. Exodus 35: 2 clearly states that he should be put to death. Am I morally obligated to kill him myself? I don't wanna go to prison.

My cousin has a farm. He violates Lev. 19: 19 by plantin' two different crops in the same field, and so does his wife by wearin' garments made of two different kinds of thread (cotton and polyester blend). He also curses and blasphemes a

lot. I've warned 'em, but they're still doin' it. Is it really necessary that we go to the trouble of gittin' the whole town together to stone 'em? (Lev. 24: 10-16).

I know you studied these things and have a lotta experteez in such matters, so I'm confident you got the answers for me. Much thanks.

Pastor Zeekariah Dolt

Not humor

Killing people? Stoning them to death? What about bombing them? Regular, easy-going people, under the direction of an authority figure, will go along with just about any order they are given by their authority figure, even delighting in inflicting pain. In 1961, Yale University psychologist Stanley Milgram, and many others since, proved this. (See <http://www.theatlantic.com/health/archive/2015/01/rethinking-one-of-psychologys-most-infamous-experiments/384913/#ixzz3RAf21JXx>) But it doesn't even have to be a direct order! Remember the monkeys in the cage. The mindset can evolve in the group even without an authority figure driving it. In other words, each individual must have sound ethics and autonomously apply them or a group can become a heinous, robotic mob of self-appointed, self-anointed enforcers and thugs.

Ancient progressives & conservative

Progressives in religions are often feared, ridiculed and suppressed. Any modernization is frightful and offensive for ultra-conservative fundamentalists.

In their time, Josiah and Jesus were progressives. Josiah got his way fast because he had soldiers and used them. He killed with royal impunity. Jesus killed no one and was humble. Both men shook the ultra-conservatives' ideology and caused great idea change that led to change in the culture.

The Egyptians were the conservatives that Moses was up against. The conservative Jews and conservative Romans were the people that Jesus and Paul were up against. Jesus espoused some radical, liberal ideas. Paul organized the new religion. Josiah and Moses beat their conservative opponents in their own lifetimes. Conservative opponents (the Sanhedrin and the Romans) murdered Jesus and Paul. Nevertheless, Jesus' and Paul's ideas won when the Romans became Christians three hundred years later. Those same ideas still spread today. Today's conservatives have traditionalized the former liberal and progressive ideas of Christianity's founders into ultra-conservative ideas. They've re-crafted Jesus into what they like. (See https://funnyjunk.com/funny_pictures/526300/Rednecks/#e503a8_679125)

Splinter groups

From the invention of Abramic monotheism, humanity got three very large, organized and dominant religions, Judaism, Christianity and Islam. These splintered into factions with somewhat different ideas and customs. They are still changing. But did any of these groups actually make the world a better place? Were theft, slavery and murder reduced or eliminated? Was an accurate way to investigate nature invented so we could better understand our surroundings and improve our condition? It's a mixed bag of good and bad results throughout the history of all three of the Abramic, monotheistic religions.

The Sumerians, Egyptians, Inca, Mayans and Aztecs had highly productive societies without monotheism. They built huge pyramids because of their leaders' religious belief in an afterlife or as a place of animal or human sacrifice. But did their religions civilize the people, reduce or eliminate murder, theft, and rape? Somewhat. The common people had employment and little personal freedom or free time. We can also bet that the punishment for serious crimes was death. That must have provided a deterrent and created a more orderly society.

Hindus & Buddhists

These two religions have no belief in an eternal afterlife with a single, all-powerful god in residence. Instead they have largely drifted away from devoutly worshipping many gods to a belief in reincarnation and meritorious living in *this* life, so as to have good future lives on Earth. In other words, modern Hinduism and Buddhism build into their believers some natural stops against criminal desires and criminal actions. Hindus and Buddhists tend not to murder so that *they* won't be murdered in their *next* life. They tend not to steal so that they won't merit being victimized by a thief in their next life. The same holds for all wrongdoing. This is their worldview that facilitates their moral behavior. Conduct is self-optimized by each individual to benefit both the individual and the society. The claim of reincarnation is not rational, but it does advance law and order. These two religions have internalized and institutionalized a variation of *The Golden Rule* without having any commandment for it. (The Golden Rule: "Treat others as you would have them treat you.")

Trying to get moral behavior from the masses

Christians and Muslims have had varying ideas of an everlasting doom in a fiery underworld as punishment for wrongdoers in this short life. They have had various ideas about a place of reward in an afterlife of everlasting pleasures for the prayerful, righteous, defenders of the faith.

The Christian Bible depicted a judgment day at the end of their god's grand commerce period of humanity on our planet. Here in this *test life*, a positive balance in good deeds done, less the fewer bad deeds done, would earn the believer a place in an afterlife in heaven with the god. "Admittedly it is an attractive product," notes Priest Andrew Greeley. But do these models of an afterlife motivate the believers to act civilly and refrain from criminal acts? Yes and no, and prisons are full of criminals who are religious. Still, believers insist that if everyone were just a member of *their* religious group, living by *their* laws, that an ideal community would develop and there would be peace on Earth, goodwill toward men. Humanity has been trying that using religion for thousands of years and we keep getting the same, murderous, pathetic results.

Karma runs over dogma

Karma is the Hindu and Buddhist concept of cosmic justice based on one's good actions and bad actions in this life affecting one's *future* lifetimes. Good lives in the future come from a positive balance sheet. (You have to help people in this life to keep from coming back in a future life as a rock, a fly on dung, or as a deer killed and eaten by a lion, or as a poor person who works without any luxuries in life.)

We can then ask the question, "Which idea has worked better to cause people to behave better, *believing in, worshiping and fearing* the old, angry, single god of the Jews, Muslims and Christians, or simply *believing* in karma?"

Karma.

Buddhists and Hindus *internalize* the idea of living a morally good life. In fact, in the Buddhist, Himalayan nation of Bhutan, the king liked to point out that they prefer not to measure their nation's Gross Domestic Product (GDP) to determine the economic health of their country. They prefer another, more important measurement for the overall health of their society, their Gross Domestic Happiness (GDH).

Hope

Some Christian preachers have said that we cannot muster the will to live day to day without *hope*. But for the preachers, *hope* is always their religion's brand of hope. They want to expand their brand's market share—even corner the market—by offering believers

artificial hope in a fantasy afterlife. People believe it. Others lie about having seen it. (See <https://www.yahoo.com/parenting/boy-who-claimed-he-went-to-heaven-recants-108278459057.html>)

Genuine hope has no brand name other than *your own*. Hope is free for the taking, like breaths of air. No one owns it. Hope is made by personal goals that one throws out in front like an electromagnet and turns on so that one can be pulled toward it. This is optimism. Hope sets the stage to have goals and goals set the stage to have hope in attaining them. Just setting positive goals generates hope. Just having hope makes those goals reachable. Happiness results.

Even worse, believing in an afterlife reduces the value of life on Earth to near zero, since the real goal in such a scheme is not to live, but to die. Hence, Muslims and Christians have very little interest in preserving the very planet that they believe their god created for them. They hope for prophesied war, the extinction of their religion's enemies and in the aftermath, a paradise on Earth.

Jews hope for a special king to be born among them and lead the tribe. But this isn't a beneficial hope to have either. It helps no one. It's based on a wish that began when the tribe was conquered and wanted a powerful, warrior king.

Without positive, genuine hope, with big benefits that can be realized, we become depressed, fatalistic and nihilistic or suicidal. Depression is a syndrome that has three general stages, according to one evangelical minister. First, one feels no hope of anything good to come in one's life. ("Life sucks.") Second, one revises one's memories of the past so that they contain no good content. ("Life is bad. Nothing good ever happened to me.") Third, as it progresses in a person, depression can result in self-destructive behavior like overeating, drug abuse, alcoholism and even suicide. Some depressed people try to convince others that there is no reason for any hope and that nothing good ever happens. They denounce optimists because misery demands company. It's a game of "If I'm not happy, you shouldn't be either."

Depression can be triggered by a hope-robbing event like a traumatic accident, the death of a loved one, being raped, robbed or physically beaten, failure in school, a cheating spouse, a separation, a divorce, a business failure, the loss of one's job or by high stress, insomnia, drug addiction or alcoholism. Sometimes depression is naturally caused. The syndrome of depression called Seasonal Affective Disorder (SAD) is triggered by the short, dark days of winter for people living outside of the tropics. In the northern hemisphere, this is a large problem for many people in the months of November, December and January. It is clear that this is why northern Europeans invented festivals of lights and holidays of gift giving, lighted trees, candle-lighting ceremonies, during these months. These celebrations are scheduled around the winter solstice. They counteract depression. They give children hope, and anticipation, wondering what gifts they will receive, and then the delight of getting them and playing with them.

The Pagan holiday of winter solstice was called Yule. In Roman paganism, December 25th was the day of celebrating the Sun god Sol Invictus. Why? It was the first day people in the northern hemisphere could detect the sun beginning to move north again, making the days longer, brighter and promising springtime.

Later when Catholicism swept across northern Europe, the holiday was altered and renamed *Christ Mass*, then *Christmas*. The church changed the name of the Pagan festival celebrating the return of the light from the Sun. The church turned Yule and the sun god's birthday into Jesus' birthday and declared it a holy day, a day for going to church. The jolly, old gift giver in the red suit became a Catholic saint, Saint Nicholas. The celebration of the return of sunlight and longer days, were now fused into the new, Rome-based religion.

The Christian premise about hope is incorrect. One *can* find hope in many things and activities other than religion. One can create one's own hope out of *nothing* by designing personal goals and by taking actions to accomplish them. In other words, hope is optimism and accomplishments that make us feel good.

How to feel even better in your skin

- Forgive (drop) your enemies in your mind. Change your emotions toward them so you can move onward and upward in your life. Don't look back
- Do random goods deeds for family members, friends and strangers
- Smile at people. Express your appreciation for them when they merit it
- Go walking every morning at first light. It's a new world
- Avoid sweet beverages, processed foods and large servings. Eating some raw, green foods daily will enhance your mood. If vegan-vegetarianism is your devout religion and you feel feeble and tired, try eating a small amount of cooked, organic liver for a few days and see if it doesn't make you feel much more balanced. (It's okay. You won't go to Hindu hell.)
- Make a list of all the bad things that happened to you, what you learned from them and how they redirected you
- Keep an ongoing list of all the good things you have and have had in your life
- Make what you love doing a paying career in which you consistently under promise and over deliver to others. This is the opposite of greed. It builds goodwill and better friendships
- Plan how to leave a helpful legacy that will benefit others for years after you're dead and then do it

16. Faith, Fire and Brimstone

"Faith is loyalty. It is support of the unknown or something that cannot be proved. It can't be proven, it can't be disproven, as far as the faithful are concerned."

—Radio Talk Show host Rush Limbaugh

"Now faith is the substance of things hoped for, the evidence of things not seen."

—Paul, in (a letter to the) Hebrews 11:1 (King James Version)



The Roman Jew, Saul of Tarsus (Apostle Paul) – Wikimedia

Faith

Paul's verse about faith conveys two ideas that shut down the use of logic, rational thinking and sound reasoning. Many Christians who read it accept it as sacred, even though it's not Jesus' statement. It was Paul's idea. His verse also sounds hypnotic. Let's rationally dissect the claims of it.

Faith is a substance? Faith has no physical substance because it is a thought process of electrical impulses moving across the neurons in our brains. Our brains have substance, but the electrical impulses are not solid substance. Then Paul's statement is not an accurate concept. It's literally immaterial.

So what is faith? Faith is anticipation, not "evidence." I have it. You have it. Even a pet has it, waiting for food. But for the big things of deep value that a person wants in his or her life, Randy Ward defined *faith* far better: "I believe that the universe is so arranged as to honor any and all intentions that are backed by absolute commitment." That's willful. It has nothing to do with wishing and waiting and hoping and praying, then more waiting. Personal actions trump waiting. Focusing, choosing, planning and taking action lead to getting things "not yet seen" in one's life. Supernatural ideas and beliefs fail us. No matter how hard one prays to win a sports bet, it won't happen. Still, many religious sports fans in American *believe* that their god influences the outcome of sporting events. (See <http://www.christianpost.com/news/half-of-americans-believe-god-supernatural-forces-play-role-in-sports-112778/>)

Disagreement

Lucie didn't like what she read here (in an early draft). She disagreed. She said, "For me faith is an inner knowing that supersedes any outer evidence."

Watch out! Inner knowing is a false friend. When things go bad, you'll just be left with a horrible feeling that your inner knowing failed you and doesn't work. This will either make you bitter or even more irrational as you try to rationalize the failure of your inner knowing as god's will. (See Appendix I)

Inner knowing is a self-delusion and at best a 50-50 bet. Instead of inner knowing, try rational thinking, goal setting and self-propulsion. This is how to get what you want.

A really painful example of faith-based (inner) "knowing"

In October 2005 in Graz, Austria a man, who claimed he was Superman, and could fly, leaped from a fourth-floor window. Paramedics rushed the man to a hospital for treatment of head and back injuries. The man had reportedly drunk several bottles of red wine before the jump. He had yelled from his apartment window "I am Superman! Nothing can happen to me!" Then he threw himself out of the window in Superman flight posture. Fortunately, he landed on an awning before dropping to the sidewalk. The awning saved his life.

Wine and prophesy

What was a primary beverage of the people and the prophets of the *Bible*? It was red wine. Open well water then, as it is today, was contaminated with bacteria that cause disease. One has to heat it to boiling it to make it safe to drink. Grapes, however, are sealed vessels of safe water and sugar. Unfortunately, grapes were only available at the end of summer (ripe on the vine), so storage of the juice for year-long consumption was necessary. The storage of grape juice results in fermentation, creating alcohol in the juice. Alcohol kills most disease-causing bacteria, so the juice remained safe to drink. When people drank this, they got intoxicated. The ancient Greeks and Romans added higher-alcohol wine to water, making it safe to drink and less likely to get them drunk fast. Drunkards drank undiluted wine. (See http://penelope.uchicago.edu/%7Egrout/encyclopaedia_romana/wine/wine.html)

Noah was a wine-drinking prophet in the *Old Testament*. He predicted the future for his sons after he drank wine and then passed out, naked and drunk. (See Genesis 9: 24-27) There are 129 references to wine in the *Old Testament*. Since few people drank bad water and most drank wine, most people—including the sacred, religious leaders—were intoxicated much of the time. Prophesying was easy. Drunks told wild stories. Some really wild stories got passed on as biblical miracle stories, becoming "absolute truth" for believers today.

All belief is pure grief

"Believe nothing! Belief is a confession of ignorance!" said Buddha. (See Appendix E) Belief is a bad habit of mind in which confidence and trust are given to an idea prior to proof. It's wishful and often dangerous. When people act on beliefs, errors and troubles soon follow. Seeking only the facts and getting rid of beliefs benefit us immediately with accuracy and honesty. So why don't we stop using the statement, "I believe" and switch to "I suspect" instead, and then prove it or disprove it? We use the verb *believe* instead of *trust* and *hope*. We use the concept of belief as something resolute, but it's not. No belief is a factual s, in fact, it means to have an opinion. (See <https://www.etymonline.com/search?q=to+believe>)

There's a short joke about a drunk who was asked what he *believed*. The questioner was looking for a religious response. She was shocked by the answer. The drunk smiled an inner-knowing smile at her, raised his vodka bottle in the paper sack as a toast to her and simply said, "I *believe* I'll have another drink."

There's negative value in *believing* anything. So why ever *believe* anything? It's always suspect because it requires naïve faith. Why not have verifiable knowledge instead? This will greatly reduce the faulty premises and critical thinking errors that ensnare us.

And what's even more counterproductive than being religious and insisting on faith as one's best operating system in life? It's being a scientist and using the term *believe* to apply to scientific discoveries. Far too many naïve scientists use this bungling, faith-based verb. No wonder religious people often ridicule scientists and their findings. Seeking *certainty* from scientists, the public hears instead that what scientists offer is an *alternative belief system*. But this is not what scientists mean to say or imply. They are hooked by inept word usage from religion. Scientists absolutely need to eliminate the verb *to believe* from their lexicon.

Scientists often say that they *believe* in evolution! Wrong verb entirely! When scientists say, "We believe we've found something," they are communicating a faith-based concept. If they say instead, "We highly *suspect* that we have found something," then no one has to *believe* anything. It either turns out to be correct or not after serious investigation.

The Apostle Paul on the International Space Station

Instead of having precious beliefs in old religious fiction, why not insist on genuine non-fiction, knowledge of the real! This way demands testing and retesting by others. All must get the same results to prove a claim genuine. Science self-corrects this way. Clinging to a system that does not self-correct leads a person astray. The more fact-based knowledge we get, the more visible the whole of Reality becomes, "like seeing through a glass clearly."

If Saul of Tarsus (the apostle Paul) were (supernaturally) dropped into our time, he could enjoy hearing about all our scientific discoveries and play with the technology that resulted. His worldview would be far broader than it was 2,000 years ago during his *harsh* life. He might write and give talks about how he had to see the world in that old culture and limited knowledge base, compared to how much better and richer he could understand the true nature of things today.

We can certainly appreciate what Paul went through trying to civilize the brutal Roman mindset of his time. One can imagine that he would have enjoyed a second life today in our more civilized and knowledgeable world that he helped to bring about. He might enjoy a few days on the International Space Station. Picture the Apostle Paul with a new career as a university professor teaching thermodynamics and giving his students a take-home exam.

An analysis of Hell

To grasp the details of the following humor, one needs to know a few terms and a little history:

- Something that gives off heat is said to be *exothermic*. Something that absorbs heat is *endothermic*
- In chemistry, a *mole* is a term that is short for *molecular weight*. It just means the weight of a molecule, determined by adding the atomic weights of the elements of which it is composed. My chemist friend Dr. Lenny says, "It takes a substance and converts the gram weight to a count comparison, such that equal amounts of atoms are matched"
- Robert Boyle was an Irish chemist and physicist. He lived from 1627 to 1691. He may have been bored with the study of solids and liquids, so he explored the characteristics of matter in the gaseous state. He investigated the behavior of gases as their temperature increased and decreased, and how that was affected by changes in the amount of volume they occupied (compression or decompression). A rapid increase in the volume (decompression) lowered the temperature of a gas, while a rapid decrease in volume (compression) increased the temperature. *Boyle's Law* resulted from this testing. Today refrigerators, freezers and air conditioners are

examples of where Boyle's law has been applied. Boyle studied the thermodynamics of gases. Thermodynamics is the study of heat generation, heat transfer, and the conversion of heat into work.

A thermodynamics professor wrote a take home exam for his students. It had only one question: *"IS HELL EXOTHERMIC OR ENDOTHERMIC? SUPPORT YOUR ANSWER WITH A PROOF."*

Most of the students wrote weak proofs of their hypotheses about Hell using Boyle's Law, but one student topped them all. He wrote:

"First we must postulate that if souls exist, then they must have some mass. If they do, then a mole of souls must have a mass and a volume that we can measure."

"So at what rate are souls entering and leaving Hell?"

"There are no religious scriptures documenting mass escapes from Hell, so I think we can safely state that once a soul gets to Hell, it will not leave. Therefore, no souls are leaving."

"As for souls entering Hell, let's look at the different religions in the world today. Many of these religions state absolutely that if you are not a member of their religion, you will go to Hell. Since there are more than one of these exclusionary religions, and since people do not belong to more than one religion, we can safely project that all souls will go to Hell."

"With birth rates high in the world today, we can also expect the number of souls in Hell to increase exponentially over time."

"Now, we need to look at the rate of change in the volume in Hell. Clearly, if Hell exists, then it must have a shape and contain a certain volume that we can measure."

"Boyle's Law states that in order for the temperature and pressure in hell to stay the same, the ratio of the mass of souls to volume needs to stay constant. This leads to two possibilities: 1) If Hell is expanding at a slower rate than the rate at which souls enter Hell, then the temperature and pressure in Hell will increase until all Hell breaks loose. Or, 2) If Hell is expanding at a rate faster than the increase of souls in hell, then the temperature and pressure will drop until Hell freezes over. So which is it?"

"If we further accept the postulate given to me by Theresa B. during freshman year, that, 'It will be cold night in Hell before I go to out on a date with you!' and take into account that I still have not succeeded, then 2) cannot be true, making Hell EXOTHERMIC."

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Note: The students were given an impossible task for using the scientific method because there's no way to find Hell, let alone to measure and test it. Instead, the professor wanted to see if the students understood Boyle's Law. Despite the faulty (but hilarious) premises that the student chose, his excellent deductive reasoning and his applications of Boyle's Law likely earned him a top grade in the class.
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The history of the word *Hell*

Irkalla or Aralu were names of a mythical underworld in the ancient Sumerian religion long before there were Jews, Christians and Muslims. But only in Christianity did the concept mutate into a place of *everlasting* torment.

Our English word *Hell* comes from the Old Norse goddess of the Viking underworld. Her name was Hel. Linguists think that her name meant "The Hidden." This Viking idea entered Christian theology late and has become a centerpiece in all the splinter groups of the Christian faith since. The Jews at the time of Jesus had no doctrine about an underworld ruled by a devil.

Christians slowly blended the Greeks' concept of an underworld called Hades and Tartarus with the Vikings' goddess of the underworld *Hel*. They also took the concept of an outcast angel-turned-devil from other old myths of previous religions. (See <http://www.ask.com/web?q=beelzebub&o=0&qsrc=0>) Now, for Christians, a devil is said to reside underground in a place of eternal fire and brimstone. This entity is said to have supernatural powers, to tempt humans telepathically from afar, to make evil deeds happen, which delight him.

In the Hebrew Bible there was no claimed afterlife, only Shoel (stillness) and no devil, only a prosecutor named *Ha-satan*, a servant of the judge (god). In the original Hebrew story, Ha-satan tests people's worthiness. From this the early Christian and Islamic theologians re-crafted the character, as an evil being named *Satan*. (See <https://pathoftorah.com/jewish-apologetics/who-is-satan/>)

Ancient Mediterranean people had certainly seen or heard of volcanoes spewing fiery hot, sulfur-smelling flames and fumes from deep underground. For Christians, Hell then became this underworld, the awful, fiery, smelly, life-threatening place. (But science has shown that earth's massive tectonic plates rub together creating volcanoes.)

Jesus never used the word *Hell*. (He wasn't a Viking.) However, the New Testament books did mention a horrible, sulfur-smelling place of torment called *Gehenna*. (See <http://www.blueletterbible.org/lang/lexicon/lexicon.cfm?Strong=G1067&Version=kjv>)

Old, old words

Back in time in old Jerusalem, in about the year 990 BC—3,025 years ago—King David had captured the city for his tribe (the Hebrews) from the town's founders, the Jebusites. He changed the town's name from *Jebus* to *Ir Shalem* meaning "city of Salem." (Today it's pronounced *Jeru-salem*.) David made it the capital of his small nation. The small city was built on a plateau surrounded by ravines and valleys. One narrow, deep, little gorge on the western side of the city was called *Gai-Ben-Hinnom*, meaning *The Valley of the Son of Hinnom* in Hebrew. The residents dumped their garbage over the edge into this gorge. It was convenient. (The Hopi Indians of northern Arizona did the same off of their plateaus.) Eventually the name *Gai-Ben-Hinnom* got shortened to *Gehinnom*. The Greeks in the area couldn't pronounce Hebrew well, so they called it *Gehenna*. In English it's *The Valley of Hinnom* or just *Gehenna*.

This garbage dump was also where the corpses of executed criminals, the carcasses of animals, and every other kind of rotting filth were dumped. Fires were kept burning to consume the rotting garbage and to keep disease-spreading rodents and insects from living and multiplying in it. Those in charge of the fires tossed in mined sulfur to keep the fires burning. Sulfur burns slowly. Its heat dries out rotting flesh so it will then burn. Burning sulfur has a strong odor of rotten eggs. The translators of the *Bible* into English used the older name for sulfur, *brimstone*. (See: <http://www.webelements.com/sulfur/history.html>)

This is how *fire* and *brimstone* became synonymous with *Hell*.

Holy smoke!

In this fetid garbage dump, Gehenna, from about 2,650 to 3,000+ years ago, priests sacrificed children to the god *Baal Moloch*, who was worshiped as a golden bull or calf. Priests would bang on drums so that the fathers would not attack the priests when they heard the screams of their children being burned alive in sacrifice to Lord Moloch.

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Note: *In the Old Testament story when Moses goes alone up to the mountain to talk to the new god, his brother Aaron and all the escaped Hebrew slaves from Egypt make a sculpture of the old god Baal, the golden male calf, and start worshiping it. Before Moses, Baal was one of the Hebrews' popular gods. Ultra-orthodox Jews still use baal shem, as a title for rabbis, who cure people.*

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The boy-king, Josiah, put an abrupt end to Baal Moloch worship by having every one of the Baal priests summarily executed. Josiah had his soldiers burn the priests' bones on their own altars. However, this did not end Baal worship elsewhere. In North Africa, the Carthaginian general, born about 400 years later, was named Hannibal meaning "Beloved of Baal." This god's name was also brought back as the name of the fictional serial killer, Hannibal Lecter, by novelist Thomas Harris.

Moloch had never come to life from any statue made of him. The priests fabricated the statues and they fabricated the stories about this god. They alone insisted on the need to worship this god, and they alone invented the ceremony of burning children alive to the god. But why would priests burn innocent children alive for a make-believe god? Because they got to have a top job, high social status and power over people at any cost to the others. (And likely because they enjoyed it all in the most perverse, psychopathic sense.) But here's the kicker. These priests got their pick of wives and their offspring thrived in luxury, inheriting social status and power in the social order. They were almost equal to powerful governors.

How did they get away with murder for generations? By tradition! The Baal Moloch priests were the traditionalists and conservative leaders of their time.

Fundamentalist followers of all religious traditions protect what they have and don't subject their beliefs to critical thinking or reassessment. They favor their tradition. "That's the way it has always been done around here" or "God said it. I believe it. That settles it." They're stuck and unwilling to self-correct. Worse, their clergy has gotten away with deceptions, fraud and rape that would be serious crimes for anyone else in any other job.

One fast way to get everyone out of such a bad religion is to murder all the priests and burn their bones at their own place of worship. It worked for King Josiah. It put an end to the Baal Moloch religion in Jerusalem.

Later, Greek-influenced Christian literature (scriptures and prophecies of the New Testament) referred to Gehenna and to Hell as the same place, as a place of *fire and brimstone*, as a place of burning pain and suffering in an afterlife underground. Today there is a city park on top of the old garbage dump in Jerusalem. In other words, and ironically, Hell actually is underground now.

The original Greek scriptures of the New Testament only spoke of Gehenna, which got translated as *Hell* in the English Authorized Version of the *Bible*, crafted for King James the First of England in 1611. (Vikings, with their old story of the goddess Hel, had been in England for six centuries by 1611.)

Previously, the Greeks had brought to Jewish culture their concept of Hades, the underworld of the evil dead with make-believe demons, all of which blended nicely with the fire and brimstone concept of Gehenna in the newly formed Judeo-Christian culture. This abode of the dead now had demons, fire and smelled of burning sulfur. In the *Book of Revelation*, the novelist embellished it even more, so that Hell became a *lake* of burning sulfur. This is the highly eclectic concept of Hell that has been handed down to us, but started as a garbage dump and a Viking goddess. This bizarre concept of Hell is still being

taught to gain religious converts and tithe payers and to keep the believers obedient to the religious leaders. It evokes fear. After all, who would want to die and go to Hell when you can join a salvation group and imagine going to a pleasant, eternal paradise in the sky instead? Only those who are rational and doubt all tall tales have immunity to the viral concept of hell.

Muslims call non-Muslims infidels. The Mormons call outsiders apostates or gentiles. The Catholics call them heretics or pagans. Today some evangelical preachers say that non-evangelical Christians like Muslims, Catholics and Mormons will be going to Hell to burn forever in a lake of fire that smells of burning sulfur. This belief comes from the hellish dream-vision of the end of the world by John of Patmos in the last book of the *New Testament* in the Christian Bible, the *Book of Revelation*.

Armageddon is *har megiddois* in Hebrew, which means the war for Mount Megiddois in Israel. This is the name John of Patmos (or writers in his name) gave to this fictional vision of a final, regional war (Revelation 16:16) Today's Evangelicals interpret this war as a worldwide nuclear war with fire pouring out of the sky burning people to death in extreme agony. This sounds like a Christian evangelical form of Baal Moloch worship—a death-ritual sacrifice of masses of people. It's the polar opposite of Jesus' core teachings.

Marketing Jesus to Moloch worshippers & gladiator fans

Jesus did not write or dictate the gory *Book of Revelation* in the *Bible*. Jesus' message of love, forgiveness and kindness got hijacked and then largely abandoned by many of the writers in The New Testament. But it gets worse.

Evangelical Christianity now hosts and propagates a newer form of Baal Moloch worship that entered the Christian religion like a stealthy idea virus after the time of Jesus' life. The worst of paganism sneaked back into Christianity as the fiery, tribal warfare predictions of *The Book of Revelation*. These predictions have infected Christianity with the old pagan idea of people being burned alive for a god. No theologian has stopped it. Christians preach from *The Book of Revelation* as if it contained Jesus' own word and teaching. It does not. It is a blood and gore, religious mystery novel written between 68-96 AD. It made Christianity highly appealing to pagan sports fans who formerly enjoyed gladiator deaths and watching early Christians being burned alive at the stake. Evangelicals spread the ideas in the Book of Revelation today as the centerpiece of their religion and the main storyline in their publications and preaching. Death by fire for nonbelievers is now more exciting for many Christians than Jesus' message of love and kindness, especially in the southern United States. Best-selling, evangelical authors and pastors milk that market relentlessly.

Irrational, presidential belief

"A healthy society is a society that welcomes all faiths," said U.S. President George W. Bush. But the opposite is the case, because virulent religions struggle to be the one-and-only faith. How many people have died in religious wars and how many have been the victims of rivals of a different belief? Tens of millions. Islamists today have shown us that when you welcome faiths that believe in holy war and god-approved murder of outsiders, you get both.

Strong religious ideologies want to impose their worldview and their beliefs on more and more hosts. There are no anti-trust laws to prevent a religion from taking over as a monopoly and destroying benevolent, secular government of, by and for the people and the freedoms that only secularism (having no religion) can bring. Secularism is not based on a struggle against competing ideologies for ultimate control. Secularism is merely a neutral field on which people can think freely, build a stable society and enjoy life without being punished for not belonging to a group whose leader(s) seeks absolute dominance over everyone, often in the name of a make-believe god.

New Age religion

The name New Age was popularized by the American mass media during the late 1980s, to describe the alternative spiritual subculture interested in such things as meditation, channeling, reincarnation, crystals, psychic experience, holistic health, environmentalism, other fields associated with pseudo-science, and various 'unsolved' mysteries such as UFOs, Earth mysteries and Crop circles. Typical activities of this subculture include participation in study or meditation groups, attendance at lectures and fairs; the purchase of books, music, and other products such as crystals or incense; patronage of fortune-tellers, healers and spiritual counselors. —Wikipedia

The vague New Age movement has two opponents, the irrational, traditional, religious people, and the rational, secular people.

The varied believers inside the New Age movement really can't comprehend or tolerate the science-based model of reality any more than the believers in the old religions. Some New Agers believe in unseen, supernatural beings existing on vague "astral planes" channeling their helpful ideas to us. Other New Age believers have expectations of an afterlife in which they become human again, but without sexual impulses or sex organs. Death is a journey to an ephemeral, ethereal, euphoric and androgynous human paradise. There's no dominance and submission in their model of heaven. Enoch (from the *Old Testament*), Jesus, Krishna, some Hindu mystics, Buddha, and various other religious celebrities are often said to dwell in such a perfect, universal afterlife.

This is not *bad*. It's far less dangerous to life on Earth than Baal Moloch worship. But it's *empty* because no progress comes from it. At its core, the mystical New Age beliefs are just like all the other religions. They are based on incorrect, supernatural ideas that hook people, hijack their brains, take their money and block their potential in this life.

Evangelicals want the New Age people back in their churches. Many New Agers fled fundamentalist churches to find some shelter from the storm of words, from the constant, negative drone of preaching about crucifixion (torture and death), about Armageddon (fiery human slaughter), about rapture (silly elitism) and about eternal damnation (supreme injustice). This movement grows only because it has a soft, kind, non-threatening, feminine quality, the opposite of the biblical war god religions.

"She walked up to me so gracefully and took my crown of thorns. 'Come in,' she said, 'I'll give you shelter from the storm.'" —Bob Dylan, Shelter From The Storm

Poll: 30% of scientists claim to believe in god

The majority, 70% of scientists are not believers. Some of the 30% may have emotional needs that only religious groups can currently soothe. By believing, they can feel good with their friends and family who are highly religious. They can get conditional kindness and camaraderie at church, synagogue or mosque. But some of the 30% are employed at religion-owned universities. Do they claim belief in a god just to keep their jobs?

They could use something better, like a wholesome group offering them unconditional kindness that has nothing to do with belief in a god, an afterlife paradise and the destruction of the world. They also need new music about life, the universe and human potential.

This 30% of believing scientists includes those in the social sciences (psychology, sociology, anthropology, archaeology) as well as those in the hard sciences (physics, astronomy, chemistry, biology, geology, genetics, etc.) Fewer in the hard sciences claim belief in anything supernatural. Why? They deal with the true nature of things daily.

"...every occurrence, including the affairs of human beings, is due to the laws of nature. Therefore a scientist cannot be inclined to believe that the course of events can be influenced by prayer, that is, by a supernaturally manifested wish," noted Albert Einstein.

Declaring the truth a lie

The truth is the way things really are in nature. A fiery pit where an evil devil tortures wrong people in everlasting fire does not exist in nature. It's just ancient religious fiction as a fantasy horror story, a traditional genre of storytelling entertainment, long before there were Stephen King novels.

Speaking on September 27, 2012 in Hartwell, Georgia, U.S. Congressman Paul Broun, campaigning for reelection, declared, "All that stuff I was taught about evolution and embryology and Big Bang theory, all that is lies straight from the pit of hell."

He offered no proof of his claim. The Bible Belt audience demanded none. It reinforced their previous beliefs and therefore made the speaker one with them in group identity and reelectable in his Congressional district.

Broun was on the congressional Committee on Science, Space and Technology. Broun was also a medical doctor, had a degree in chemistry, but was dependent on religious voters' support (every two years) to keep his high-status job in the U.S. Congress.

Want to understand this phenomenon better? (See

<http://www.bbc.com/future/story/20160323-why-are-people-so-incredibly-gullible>)

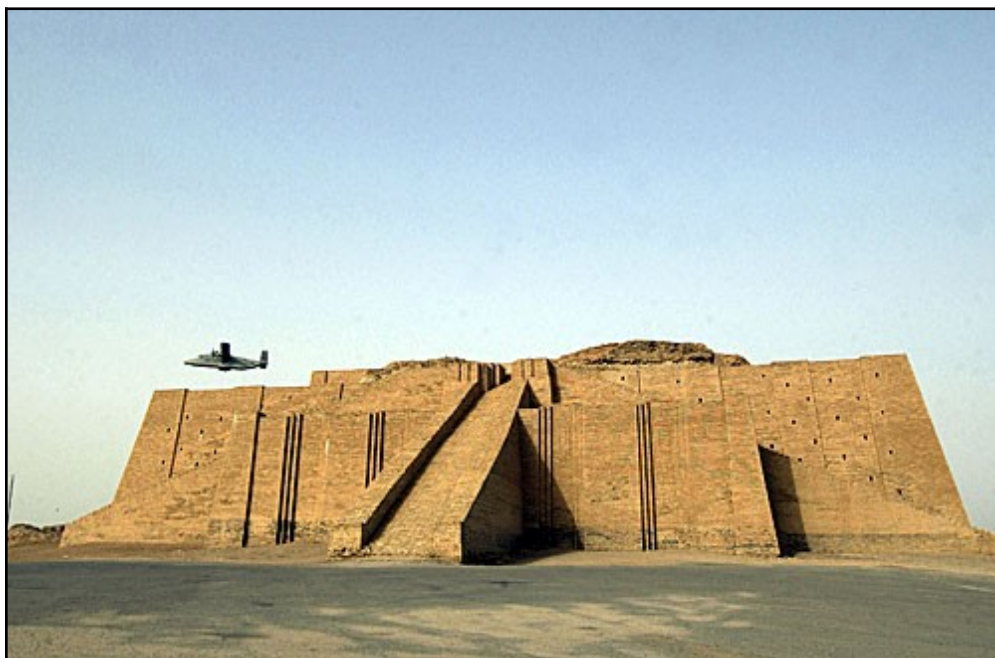
False news

The presidential election of 2016 revealed how false news can be crafted to influence the most important decisions that people make. Who benefits from crafting false news? Those who stand to gain. Who do they aim their false news at? Those who will believe it without questioning it. Who will not question it? Those who *believe* in the source, no matter what, and deny as wrong any source that says otherwise. Why would large numbers of people get it backwards? Because they have been conditioned to *believe* that the source is a major part of their in-group of believers. Politics and religion become the believers' identity, truth be damned. It could lead all the way to war for a false cause. REALLY? (See <https://www.theguardian.com/world/2016/dec/26/fake-news-story-prompts-pakistan-to-issue-nuclear-warning-to-israel> and <https://www.theguardian.com/media/2016/dec/02/fake-news-facebook-us-election-around-the-world>)

17. For Recovering Believers

Your past is not your potential.

—Marilyn Ferguson



The restored ziggurat of ancient Ur in Iraq - U.S. Air Force photo

The Sergeant

A friend and former neighbor is minimally religious. He's been a cop, a soldier and a corporate security specialist guarding military bases and airfields near the ancient ziggurat of Ur pictured above. He reads a lot of news and is decently open to new ideas with hard proof even when they come up against his worldview. This comes from good police training, because things aren't always what they first seem on the surface when investigating a crime. Good investigators look deeper. He was trained in one of the best police academies.

From his computer in Iraq, he asked, "After all, aren't Darwinism and the Big Bang theory just different beliefs based on someone's opinions and teachings?" Wow. "Opinion is really the lowest form of human knowledge. It requires no accountability, no understanding," noted Bill Bullard.

Evolutionary biology and the Big Bang theory are based on someone's *findings*, not someone's opinion and teachings. The findings in science get tested repeatedly looking for errors. Science self corrects. You can become famous finding an error in science!

Religions do not self correct. They cannot. They would have to reject their core, supernatural ideas and articles of faith for all the false premises. It is only religions that are "just different beliefs based on someone's teachings." Testing and verification are missing in religious beliefs. Faith means no scrutiny allowed.

In our culture, it is most common to *presume* that either a biblical god exists or that there's no way of knowing (agnostic). My cop-soldier friend is quietly in the latter category. (The existence of a biblical god-creator is a statistical improbability. Agnosticism is a mental exercise in futility just like theism.)

American folk religion

Rapture-believing, Armageddon-expecting, American Evangelicals can trace their beliefs back to the 1830 rapture dream visions of 15-year old Margaret MacDonald in Scotland. (Published in 1840 in Norton's *Memoirs* p.171-176.) Her Christian rapture concept spread to the English and Irish preachers Edward Irving and John Darby, then to American preachers William Blackstone, Cyrus Scofield, and Dwight Moody. These Protestant preachers formed their theology from Margaret MacDonald's and John of Patmos' dreams.

If Evangelicals applied their own *false prophet test* to Margaret MacDonald, their rapture theology would collapse. Secrecy has been well maintained because most Evangelicals have never heard of Margaret McDonald. Modern evangelical promoters have made millions popularizing her rapture dream as gospel in their books, a board game and a movie. Margaret's rapture idea has become the core of Christianity for millions of evangelical Americans.

When the U.S. military became increasingly evangelical in the 1990s, this American folk religion became linked to patriotism and nationalism. Patriotism, nationalism and religion blur together. They become simply *America as Zion*, god's new chosen nation and god's new chosen people on Earth. They are determined to ridicule any opponent who their politicians and celebrity pastors declare to be the enemy of their god: Democrats, abortionists, communists, liberals, socialists, gays, atheists, climate change scientists and evolution teachers (biologists).

American Evangelicals and some of their politicians frequently voice how important it is to have a religion that is not separate from the government. Many would like their Protestant evangelical religion imposed on the American nation. They are convinced that this is their god's will and that it would restore America to being favored by their god. God With Us. Hitler's *Gott Mit Uns*.

For many American believers, the biblical model of god is that of a judge, with the *judgment day* approaching. Self-appointed to act on behalf of their god, some evangelical pastors and their church members are pushing hard to make sure that judges chosen for the U.S. Supreme Court are appropriately religious. Many favor old biblical, religious law over secular law. (See Appendix C)

Some American Evangelicals see themselves as reserve soldiers in the war against evil, the devil's scheme against their god. Anything that conflicts with their old-world model of god as creator of the world must be evil, like teaching students about evolution in public schools.

They anticipate rewards for their good soldiering. Many expect an afterlife back in their bodies with a perpetual family reunion in heaven, complete with golf courses and everlasting potato salad at the picnics. This sounds like a truly boring prison compound, where "you can check out anytime, but you can never leave." Mark Twain quipped that he "would prefer heaven for the climate but hell for the company."

Wars & genes

Christians fought the Crusades about a thousand years ago because the original Islamists were advancing on Europe, making converts via the sword and pirating the trade routes. The Roman Catholic Christians in Europe attempted, in many crusades of soldiers (even children soldiers), to draw the line at old Judea and recapture old Jerusalem. They briefly reoccupied their religion's place of origin. They briefly established the Kingdom of Jerusalem as a Christian outpost. Back in southern Europe the Catholics expelled the Muslims (the Moors of northwestern Africa) from Spain and Portugal. Even the newest European Christians of the time, the Vikings, sailed from Norway to the Mediterranean to get in on the holy mission of holding Jerusalem. It was a head-on clash between worldviews and brutal archers and swordsmen, each battling for dominance.

From the leaders' and fighters' points of view, the purpose of their war was to kill the

ideology and the culture of the opponent. But consider that war is really between bodies to eliminate genes (the end of their seed). This kind of war is correctly called *genocide*.

The best defense against such a threat is The Powell Doctrine (after General Colin Powell of the U.S. Army). It says that to win a war, one must apply overwhelming and relentless force against the opposition, like in World War II against Hitler's Germany, Mussolini's Italy and the emperor's Japan.

Today there are descendants of both sides from World War II who are interbred and live in each other's lands. All groups of humankind can and do interbreed. Many people will even change religions if threatened with death. *Who* the group's opponent is can change. Yesterday's enemy often gets assimilated into the group. Some of the genes of all groups go on to new generations. War is ultimately a waste, but often necessary to defend one's genes against fanatics driven to mayhem by their religion or political dogma, or both.

.....
Note: *An evangelical friend from Louisiana proposed that the cure for the turmoil in Iraq was for Iraqis to convert to his Protestant, evangelical Christianity. He did not volunteer to go as a missionary to convert them.*
.....

War doesn't decide who's right or wrong, only who's left—to breed, populate and perpetuate their culture or religion until the next war, in which mostly males may be wiped out yet again. But empowered with nuclear weapons, religious fanatics will be very ready to use them, literally for their god's sake. Women and children will be equally among the smoldering dead if that happens. Will anyone be left after mutually assured destruction?

Anarchy & mayhem?

Believers often fear that civilized American society might fall apart without a belief system in a vengeful god. Christians might revert to anarchy, murder and mayhem without their religion-based moral code and fear of going to hell, they suggest.

It's true that it has taken thousands of years to develop groups of people into a state of semi-kindness, producing a semi-moral, semi-efficient society. But many people are naturally predisposed to expecting and giving kindness and to producing an efficient, kind and moral society. Secular Europeans today haven't turned to anarchy and murder. Most have quit believing in their former Lutheran and Catholic religions. (See <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3501430/>)

Dominionism = Domination

Religion is about money and power. "Religion is politics," notes Jose Alvarez. "I distrust those people who know so well what God wants them to do because I notice it always coincides with their own desires," said Susan B. Anthony.

Some American Evangelicals are part of a political conspiracy called *Dominionism*. They believe that they will take over the U.S. Government and make the nation a theocracy, a nation that they control. It's been tried before by their predecessors. (See https://en.wikipedia.org/wiki/M%C3%BCnster_rebellion)

Intelligent design

Another form of political manipulation comes from evangelical groups that have declared cultural war on the science of evolutionary biology. They insist that they have a more accurate model called *intelligent design* that points to a hidden creator god who made Planet Earth. In their mindset, they don't need to prove their ideas. They need only believe in the unquestionable veracity of their creation story and want it taught in public schools.

One such group of Bible-believers runs The Discovery Institute. They advocate that *design with purpose* is scientifically detectable somewhere. But they don't offer a detection method or any evidence. They are like a team playing only defense. Their job is simply to defend the faith, their *misbeliefs*. Why? Because their Bible is all anyone needs to know.

Despite their doctorate degrees in astronomy, biochemistry, molecular biology, philosophy and history, theirs is a shallow, supernatural argument. Theirs is not a genuine investigation of the way things are in nature. It's a forgone conclusion based on their belief in the *Book of Genesis* in the *Bible*. Then they have a horribly barbaric designer-creator who made all the animals dependent on killing and eating each other for survival. Some are even worse. (See <http://www.wired.com/2015/01/absurd-creature-of-the-week-strepsiptera/>)

But we know biology for what it really is. It's a self-balancing, food chain system for lifeforms that is both barbaric and highly practical for the genetic code driving it all. Still, evolution remains an insult for well-dressed people in luxuriously appointed megachurches, who go out to eat barbecued chickens, pigs or cattle at restaurants after church and speculate with each other about their rapture and afterlife...*in a mansion in the sky*.

Taxpayers are paying for the religions

An indirect government subsidy of religion has been shaping the culture and the financial structure of the United States. American religious institutions do not pay property taxes like businesses and homeowners do. They don't have to pay taxes on all the donations. They buy more assets. Their member-donors also get a tax deduction for their donations. This massive perk for religious institutions penalizes people and businesses trying to get ahead in real productivity because they have to pay taxes while religious groups do not. This builds the wealth of religious corporations and increases their political power. (See <http://www.christianembassy.com> and <http://mag.newsweek.com/2013/10/25/churches-religion-taxes.html>)

“We just want to live a Christ-centered life,” said Jenny

That's a good thing *if* it means *how* you live in peace, wholeness and dignity within yourself while engaged in cooperation, progress and acts of kindness toward your fellow human beings. (Like Jesus.) But you don't need to be funding a religious corporation and its holy executives to do that.

The moral-ethical teachings of Jesus are first rate, Jenny. They have civilized many people in the world. They have benefits for you and for others to this day. Nevertheless, believers have been led far astray with all the fabricated, supernatural stories about Jesus.

Believing that the murdered Jewish carpenter-furniture maker, Yeshua ben Josef (Jesus), will be alive again and levitate out of the sky—after a nuclear Armageddon—is proof of mass hypnosis by and for religion.

Firm, unshakable beliefs in highly-embellished, religious stories is severely goofy and will not help anyone raise intelligent children, cure diseases, understand genetics and astronomy, advance our engineering skills, improve our food supply or divert the next big asteroid away from Earth.

A Christ-centered life? Many atheists are moral, ethical, kind and helpful. If you didn't know they were atheists, you'd observe them to be living by the civilizing examples that Jesus gave, and just assume they are good Christians. Atheists are not any more evil than Christians, often far less so. (See <http://www.sharefaith.com/blog/2015/09/18-church-embezzlement/>). Many atheists are just done with the farces, outright lies, misrepresentations and the evils of religion, just wanting to be left in peace.

18. Meaning

...watch out, or the liberals will turn all your children into homosexual secular humanist postmodernist relativists who don't believe in absolute truth.

—Brian McLaren, paraphrasing evangelical preachers

Nothing has any meaning except that which we attach to it.

—Patrick Dean

When a situation is perceived as real, it can become real in its consequences.

—W.I. Thomas



Anubis - The ancient Egyptians' protector god of the dead - Wikimedia

Suicide bombers & rattlesnakes

Meaning was not written in stone or on parchment by a god. No museum has such an ancient artifact. They only have ancient artifacts of writing on stone and parchment that were created by ancient *men*, who were carvers and scribes to the powerful religious leaders and kings who paid them.

Meaning is somewhat different in all cultures and subcultures. The former meaning of the ancient artifacts in museums (for those who made them) do not have the same meaning for us today. For example, you don't expect to be greeted and protected by Anubis when you die. You may expect St. Peter at the Pearly Gates up in the clouds. The ancient Egyptian royals fully expected Anubis ([in a big way](#)).

Meaning is what we make it, as a group and individually. Think of meaning as a large number of buildings inside one's head that provide idea structure and emotional shelter. Occasionally the buildings are shaken off their foundations and are cracked by new facts.

But few people demolish their old, cracked and crumbling mental structures of meaning when this happens. (Only highly progress-oriented people do, even when it hurts.) Instead traditionalists patch the cracks with traditional ideas so that they can get back to feeling normal fast.

Our sense of *meaning* is only in our brains as thoughts and in our bodies' central nervous system as emotions. Radical Islam offers an example. "Our primary mission is nothing but the furthering of this religion," said Usama bin Laden. That was his core meaning. It made him feel good emotionally. His suicide bombers let us see just how weird, negative and deadly *meaning* can be.

If we all agree that some concept has big meaning to us, we are cohesive as a group. However, that doesn't indicate whether it is beneficial for us. Snake-handling Christians in rural Alabama, Tennessee and West Virginia focus on one verse in the *Bible* (Mark 16:18). They dance and speak in tongues (unintelligible words) while handling venomous rattlesnakes. They are emotionally high on their faith (dopamine and adrenaline), expecting that a supernatural god will protect them. Approximately 3,000 church members in the U.S. do this regularly in their religious meetings. Some never get bitten. Many others do. In 2012, Pentecostal pastor Mark Wolford, 44, died (as did his father before him) in a church snake-handling event. Pastor Jamie Coots died snake handling in 2014. Other church members have deformed hands and arms after surviving venomous bites. These Pentecostal believers teach viper handling to their children as something their god wants them to do in church. It's child endangerment, a crime for religion.

Contagious ideas

Contagious ideas take over people's thinking *and* spread to other people. They work because our brains are wired to learn from others how to do things to belong. We also adopt others' ideas if they make us feel good, or simply because we see our peers adopting them. But most commonly, we got infected with contagious ideas because we grew up exposed to them in childhood, when we had no defenses that could prevent us from accepting false ideas. Such ideas can even have a life of their own. *They adopt us!* They can even be silly jingles, songs or advertising ploys that stick in our heads and cause us to hum, whistle, sing or speak them. Then other people copy us. Similar to computer programming code, contagious ideas are not physical objects, but programming for human brains. There are thousands of "bullshit" ideas and ideologies out there looking for a ride in brains that have little or no defenses against a bullshit-infected peer group that hosts and spreads them.

Legal pyramid schemes & the death penalty

Jesus did not favor the wealthy, power-seeking bullies. He never said, "Blessed are those who seek dominion over others." Nevertheless, today's megachurches are a pyramid scheme based on money, power and prestige. There can be thousands of believers on the bottom and one religious leader at the top of each large church, with many volunteers and often a few paid assistants. Believers donate money assuming it will be their god's money for some higher purpose. Instead top religious leaders build lavish offices and homes. One megachurch leader even spent some of his religious salary on multiple transactions with a male prostitute. Another went on a deluxe ski vacation in Colorado, while another sent his children to Hawaii in the church jet. In 2007, the U.S. Senate asked six churches to submit financial documents because of complaints about the lavishly wealthy lifestyles of the churches' head pastors.

In radical Islam, true believers don't just give money, but are robbed of their own lives if they blow themselves up for their religious leaders' cause of killing non-believers and wrong-believers, *infidels*.

Muhammad Abu Wardeh, a recruiter of suicide bombers for Hamas in Palestine said, "If you become a martyr, God will give you 70 virgins, 70 wives and everlasting happiness."

Sexually frustrated, uneducated, zealous, young, Muslim males hear this, believe it and volunteer to die to get it. But when the rest of us hear this, we hear it as a deadly absurdity. "Those who can induce you to believe absurdities can induce you to commit atrocities," said Voltaire.

Religious ideas are protected from being checked for validity. Noting their absurdity can get one the death penalty for blasphemy and apostasy in Islamic Pakistan, Afghanistan and other Islamic regimes. (See Appendix D)

Three flavors of monotheism - Three contagious ideas

There are three versions of Abramic monotheism and each is centered on a single, powerful, contagious idea that believers have memorized because it makes them feel good about themselves as their god's special group.

The first is Judaism. Its 2,650 year-old contagious idea made former slaves feel good, even elite. "I am the Lord thy God...Thou shalt have no other gods before me" (Exodus 20:2-3). This idea spread and morphed. It was highly intimidating to polytheists, who were the vast majority in Josiah's time. It eliminated all polytheist ideologies. Gone are all the old gods of Assyria, Egypt, Canaan, Babylon and Greece. You can't find worshippers of a Baal statue in Amman, Beirut, Jerusalem, Baghdad, Alexandria, Athens or anywhere else today.

The second is Christianity. Its followers are also under the effect of the first contagious idea of Judaism. But they added a bigger contagious idea. It was powerfully emotionally attractive, guaranteeing a reward, a pain free, glorious afterlife. "For God so loved the world that he gave his only begotten son, that whosoever believes in him should not perish, but have everlasting life" (John 3:16). This offers a big payoff for belonging to an even more elite ideology group built on the first one. (Centuries later, even more would build on the second one.)

The third is Islam. Its followers also believe in the first contagious idea, but not the second. Fourteen hundred years ago Islam created its own contagious idea as a war cry for increasing Arab self-esteem and for conquest, "Allah-u-Akbar!" ("God is greatest!") If you add the inferred word *our* in front of this ("Our God is greatest!"), you can see why it worked so well to propel the early Arab Muslims in their conquests around the Mediterranean and into Asia. It raises each believer's self-esteem. People are attracted to *anything* that makes them feel better about themselves that also comes with others' approval. The three do this. But they deal only in artificial self-esteem based on believing.

But what happened to the competitors of Judaism, Christianity and Islam? They were wiped out mostly. Only Hinduism and Buddhism survive as other large religions because they already had large numbers of followers who were hard to convince and harder to conquer. Other groups were weak. They didn't have superior contagious ideas that also encouraged defending them at any cost, nor did they advocate rapid spread or conquest.

Today, when religious variants happen, the world mostly gets mutations within the three monotheisms. There are now reform, conservative and ultra-orthodox Jewish divisions. There are Sunni, Shiite, Druze and Sufi divisions in Islam. Christianity divided into Greek, Armenian and Russian Orthodox, Roman Catholic, and the late-comers like Lutherans, Methodists, Presbyterians, Baptists, Mennonites, Amish, Mormons, Seventh-day Adventists, Jehovah's Witnesses, and others.

Science is replacing religion for more people each year. Science provides reliable understanding. It also generates new technologies that benefit us all. Unlike religious leaders, scientists are required to prove their claims. Science goes forward with new discoveries. It consistently under promises and over delivers, providing value to humanity that makes living better, safer and easier.

Religion is just the opposite. It is inaccurate in its claims. Religious leaders are not required to prove that the god and the afterlife they are promising actually exist. Religious leaders take their customers' money for a promise of admittance into an exclusive afterlife. Religion sells promises of a make-believe afterlife. That's contract fraud. *Only* religion is not

held accountable by the law. It's exempt. Why? "Because that's the way it's always been done around here."

Contagious ideas of science?

The contagious ideas of science are discovered facts that have been tested and proven: $E=Mc^2$. Bacteria are microscopic organisms. The Earth revolves around the sun. Such discoveries have led to our understanding of nature.

Until very recently, no one could have known the grand arrangement of nature. The sciences of cosmology and genetics have now revealed the grand arrangement to us. Only science has ever worked to reveal this to us with proof. The *Bible* stories aren't real because they are based on the supernatural (fan fiction). Today there's a high standard and a burden of proof required to make claims about what's real. "Proof talks. Nonsense walks."

The Spirituality of Science

This says it best: https://nautil.us/the-holiness-in-reality-373036/?_sp=cd46d956-1ef3-4062-8e63-7b4ea5c429cd.1693948951659

19. Political Religion

Religion is a crutch for people not strong enough to stand up to the unknown without help.

—Robert Heinlein

Elections in the U.S.

The unknown is rapidly disappearing as science progresses. However, 91.8% of Americans believe in “God” or a “higher power,” according to a 2007 Baylor University survey.

Journalist John Meacham offered a reason: “In a time of great doubt, in a time of warfare, at a time when we feel threats quite immediate to us, that increases people’s religiosity as they try to find meaning and find comfort.”

Really? That would indicate that religion is a crutch. But are 91.8% of Americans really that mentally weak and dependent on supernatural beliefs to find a sense of security, or is something else going on?

The Pew Research Center released the results of a survey of American voters in 2007. It revealed that 46 percent said they would be less likely to vote for Muslim candidates, but a much larger 63 percent said they would be less likely to vote for one who has no belief in a god.

This indicates that even after al Qaeda’s 9-11 attacks on the U.S.—in a time of war against fundamentalist Islam—Americans would trust an enemy of their god running for office over a fellow citizen who was merely non-religious.

Then a Baylor University survey also found that Americans split into four belief groups. They believe that their god is either, 1) a critical, angry, moral absolutist (16%), 2) a distant god, not much concerned with our affairs (24.4%), 3) a benevolent god, concerned with humanity’s well being (23%), or 4) an authoritarian god (31.4%).

Let’s put like groups together, those claiming their god is critical, angry and a moral absolutist with those who claim their god is an authoritarian. Now we see that 47.4% of Americans believe that their god is very similar to the critical and authoritarian god of the Islamists who attacked America on September 11th on behalf of their god. But those of strong faith in one god-fearing religion respect the strong, god-fearing people of the other religion *over a non-believer* even when at war with them! That’s irrational because non-believers (atheists) aren’t killing anyone for their beliefs.

Rationalists—including agnostics and atheists—appear weak to religious people. Rationalists and atheists are not strongly organized like the religionists. They may be too weak to survive in the culture wars currently being waged by fundamentalist, militant religions. The non-religious group is only 8.2% of the American population, according to the survey.

Religion may be a crutch for individuals not strong enough to stand up to the unknown without each other. Nevertheless, psychologically conditioned by religious leaders, believers are a powerful, irrational, political force that only trusts and elects other professing believers.

From the survey, we can also group those claiming a distant god, not much concerned with our affairs with those claiming a benevolent god, concerned with humanity’s well-being. Surprisingly, they make up an equal percentage (47.4%). Combined with the non-religious 8.2%, they would make a majority. Within a margin of error of 3 percentage points, this is actually how the election numbers turned out in the 2008 Presidential election that elected Barack Obama over the Evangelicals’ preferred candidate. (Even closer in later elections.)

The USA was meant to be a Christian nation?

Many Evangelicals insist that the United States of America is supposed to be a Christian nation and was from the beginning in 1776. They insist that the founding fathers intended Christianity to be the religion of the nation. They are incorrect, as the Article 11 of the 1797 U.S. Treaty with Tripoli clearly shows:

“As the Government of the United States of America is not, in any sense, founded on the Christian religion...”

The treaty was approved by the early members of the U.S. Senate *unanimously* and was signed by President John Adams.

Many of the founding fathers of the USA (13 of 39) were members of the Freemasons. Many others were deists, not Christians. Furthermore, the U.S. Constitution consists of 4,543 words, none of which are *God, Jesus, Christian, or Bible*. Oops. The founding fathers established a religionless government.

Arabs

One religion, Islam, dominates in Arab countries. Clerics impose religious law. “...the primary [religious] ideologues fueling the jihadist movement appear to do so because of career incentives rather than ancient hatreds,” noted researcher Rich Nielsen. Leaders drive ideologies for their own benefit. Then followers—trusting, naive and with little or no scientific understanding of how things really are—support it with money, commitment and even with their lives.

The Arab Middle East has high unemployment. More than 40% of women in those countries cannot read or write. Arab countries publish few books other than the Quran. Islamic countries have male-only *madrasahs*, schools that only teach religion. But the wealthiest Arab families often send their children abroad for real education. They return to get the few good jobs. “Our only choice is to bridge this [education] gap as quickly as possible, because our era is defined by knowledge,” said Sheikh Mohamed bin Rashid al-Maktoum of Dubai who committed US\$10 billion to advance the secular education of Arab youth. But religion-steeped people have been programmed to revile secular education and are firewalled against it.

What to do then? You can't win a competition by playing defense only. There has to be a large strategic and tactical assault on the ideology to poke so many holes in it that it leaks all of its supporters. Simultaneously, you replace the ideology with the verified truth of how things really are. That's when education works.

20. Love

Love is all you need.

— *The Beatles*

Heterosexual love

Eros was the mythical son of the mythical Phoenician goddess Ashtart. Eros's name translates as *desire*. He became the Greeks' god of erotic love. The word *erotic* means *arousing sexual desire*. *Eros* has simply come to mean *sexual love*. But natural eros is just pre-reproduction biochemistry. It is hormones and dopamine affecting the brain to encourage mating behavior between a potent male and a fertile female (across the entire animal kingdom including humans).

Agape is also a Greek word. It means non-erotic love. Christians use it to mean *brotherly love*. In modern English we don't make much distinction between eros and agape. Love is simply attraction. You can say that you love your sexy spouse and that you love eating guacamole. You love playing golf, sewing, dancing, reading and you love your children.

The Romans morphed the Greek god Eros into an angel as an archer and a baby, all in one. They turned Eros into Cupid. The Roman church later allowed Cupid to be worshiped indirectly one day per year at the beginning of the fertile springtime as Saint Valentine. The red roses given on Valentine's Day are another Pagan fertility symbol. Consider their vulva-like symbolism. A flower is the reproductive mechanism of a plant. How many roses in a bouquet of red roses? The same number as full moons and female fertility cycles in a year.

Superstitious men and women used to pray to a god of fertility trying to aid their own fertility. But today, people with fertility problems go to doctors at science-based fertility clinics when prayer doesn't help.

Real men love Jesus—I love my Yorkie

In the United States a common evangelical bumper sticker message (a contagious idea) reads, "Real men love Jesus." This implies that dominant males should submit to a higher power rather than seeking dominance over others. It implies subservience to Jesus as a model of how to live. This is an agape statement, but it becomes just another statement of macho dominance when seen on the back of a 4-wheel drive truck with a gun association sticker on the same bumper and a chrome naked woman symbol on the mud flaps.

"I love my Yorkie" is a contagious, agape idea, also seen on the back of an occasional car in the U.S. It's a statement of love for a particular dog breed in this case, the Yorkshire terrier, the dear pet of the car's driver.

Consider the unstated, secondary message of each of these. "I love my Yorkie and you should get one to love also," and "Real men love Jesus and you should too if you want to be a real man."

Eros amplified to distortion

Rapists and sadomasochists have little or no agape love. They have a crude, twisted, violent form of eros mixed with a need to experience domination (dominion) over others. Violence, pain, sex and glory are linked in their minds.

Usually, our concept of agape love is both a natural, nurturing instinct *and* a contagious group of ideas that we acquire in childhood. Children adopt their parents' and the peer culture's ideas and attitudes.

The most vocal and demonstrative gay males and lesbians often flaunt an *anti-fertility eros* in shocking, attention-demanding, theatrical displays in parades. This especially irritates fundamentalist Muslims and Christians who oppose all public displays of eros—gay or straight.

In Saudi Arabia, special Islamic religious police drive around looking for any display of eros by couples in public. They arrest and prosecute men and women for kissing or hugging. These religious police have even removed red roses from flower shops on Valentine's Day (an infidel holiday).

Eros for money

Prostitutes get paid for eros, not for agape. The more eros they generate, the higher their pay. But there's no agape love. Were the prostitute to show agape love toward her clients, demands and conflicts for an exclusive and more caring relationship with the her would occur. This could diminish the prostitute's income from multiple clients that she needs for her financial security, and for any children she is supporting.

Alternative reproduction strategies

In past decades in the United States, ultra-liberal government programs for the support of the poor allowed "welfare mothers" to receive monthly money and food vouchers from state and federal governments. Many of them had children by different fathers who paid no child support and who were then free to be cads and inseminate other women who would also be supported by the working taxpayers via government doles. Such programs were destined to be extinguished from increasing abuse and the revolt of those paying for it.

In some countries in Latin America, devoid of welfare benefits, the term *the public mother* is used to describe a parallel situation with the local prostitute. Since there have been few birth control methods available in those rural, Catholic communities, the prostitute frequently gave birth, going months without the ability to make money. The partial work-around was to ask the fathers for support, which they may or may not have provided. Even if just one of the children's fathers paid some support, all of her children could eat and survive until she could "work" again. Her occasional blackmail of wealthy (married) males in the community, the "accidental fathers" of one or more of her children could also improve her and her children's living conditions.

The moral? Eros is often just problematic, not worth the brief experience.

The right to divorce has changed the single and sole partnership-for-life of marriage for many. Divorce has also generated *serial monogamy*, which allows for more gene diversification for both genders in divorce and remarriage. If one could track thousands of fertile couples over the years (whether poor or wealthy) some of their pairings and sleeping situations would look like a game of "musical beds" similar to a game of musical chairs, with two per bed instead of one per chair. Divorce and serial monogamy also make broken families and generate some chaos for young children's identities. It can lessen their self-esteem. However, these aren't issues of evolutionary importance for the genes. Diversity to enhance physical survival and to increase proliferation is what genes do. Nevertheless, if you want your offspring to have a near-optimal childhood, a stable, kind, nurturing home life with both biological parents is generally best. This has been a stable social structure that developed early with humans.

Machismo means “male-ism” in Spanish. At its worst, it is a concept in which males view themselves as random seed planters, impregnating available women. Their offspring are of no great importance to them. This comes into immediate conflict with the need for support of the mothers and the offspring. This can be a methodology for rapidly spreading one’s genes if the male is wealthy and has servants (like sultans with harems). It’s a painful formula for the women and children if the prolific seed planter is poor and abandons them.

A sailor’s saying for many years was, “A wife and kids in every port.” Without a doubt, the ultimate inland example of this was the conqueror Genghis Kahn who impregnated at least 500 women in his lifetime across a vast area of Asia. Genetic testing has revealed that one in every 200 humans living today is descended from him. Most of them don’t know that, and Genghis Kahn is dead. Then who does this benefit? Only the mechanically continuing genes.

Success formula for parents

Some males and some females naturally want to vary who they combine their genes with for new offspring. Usually, however, this is a formula for poverty, as the potential inheritance for each child is depleted in divorce by split assets and double housing costs. Hence, the optimal formula for having successful offspring currently seems to be to have children in one’s late 20s to late 30s, to have three or four children and to educate them for top professional careers and income so they can optimize conditions for their offspring.

Even poor parents have designed this and done this, watching their offspring go on to top professions to raise their own children in modest wealth and bigger opportunity, escaping poverty completely in just two generations.

A conspiracy of two committed parents highly focused and working for the fullest success of their offspring is far more leveraged and effective than a single parent trying to pull off a miracle. Religions spread this practical concept. Why? It works. The children and society benefit (and the religions get future donors.)

Children gain greatly when two parents are committed to their long-term success. Sadly, children of divorced parents are the most likely to be verbally, physically or sexually abused by their mother’s or father’s new companion. The children don’t carry his or her genes so he or she may have no interest in the quality of the step-children’s lives or that of their offspring.

Genetic agape love

What is the highest form of agape love? Think of agape love as what makes people thrive. What is the highest form of thriving? It comes from parents. It’s a sense of close belonging, self-sacrifice for each other, commitment to the survival of the children and their success. Parents have been known to sacrifice all their money and their own lives for their children needs. But there are logical limits for most parents. Most won’t spoil their children, lest they grow up without their own mental armament as the ability to cope, compete, find a mate and raise their own successful offspring.

A family results from lusty, hormonal, sexual attraction; from intense eros, built into us by DNA, by trial and error chemistry over a long, long period of time. Our genes randomly crafted those neurochemicals in us to coerce breeding activities. Naturally then, we *thrive* as families in this neurochemical *agape*.

Eros and agape are one and the same then for new couples because one leads to the other and because familial agape needs eros to make the babies. The experience of the two, eros and agape, is powerfully euphoric, involving the brain’s pleasure response to released hormones and dopamine. Parents cherish their newborns. This is highly evolved, complex chemistry. Recreational drugs can only cheaply attempt to imitate the exquisite power of this

natural, biochemical flood we just call love. At its best, love is one big emotion, crafted by our genes over eons of time as armament for our successful breeding, and as armament for our mate's and our offspring's survival. It produces interpersonal cooperation between the parents. It's not each parent for himself or herself any longer.

A nuclear family, with a kind, caring husband, wife and children can be a genetically and emotionally connected, supportive family. (See <https://en.wikipedia.org/wiki/Happiness>)

Religious people are famous for the unity and stability of families, but atheists and agnostics also have stable, caring families and raise their children to be successes (especially secular Jewish families who have often generated children who have become scientists). Helping the offspring is biologically preprogrammed into most parents. The opposite, deadbeat dads and moms are a small, but ominous percentage of the gene pool. (See http://marripedia.org/effects_of_family_structure_on_crime)

God's love

A friend in a Latin American country is a recruiter of alcoholics, and addicts. He takes them to meetings and to a special 3-day retreat. Each is continuously told, and comes to sense, that god is inside them and lives in their heart. They haven't gotten their own lives right, so they need to feel that a force greater than themselves is in them and can help them. They call this *God is love*. Most of the people change dramatically for the better. The group meets weekly becoming an emotionally positive, extended family to each one, a secular church. Even though "God is love" is a fiction, the figurative idea works on core emotions as if it were real. It becomes real in its emotional consequences for them.

Unconditional love

A sincerely happy, wandering Hindu holy man was interviewed in the documentary movie *Shortcut to Nirvana—Kumba Mela*. He said, "I love you. If you love me, I love you. If you hate me, still I love you. I love you."

Jesus advocated doing good deeds to those who use and abuse us, turning the other cheek to the next slap, and loving our neighbors (agape, not eros). The Romans heard this and were confused. They had never considered a concept as radically altruistic as dropping all selfishness and caring about strangers. (This teaching of Jesus' civilized parts of the world and is the source of secular socialism and liberalism.) A few hundred years later the term *agape* was usurped by early Christians to mean their special love for god, their god's love of mankind, as well as the self-sacrificing love they felt believers *should have* for each other.

The approach of the Hindu holy man and Jesus genuinely make us feel good because they simply extend familial agape love (as supreme kindness) to everyone everywhere. After all, we are actually all cousins in human biology. This universal kindness is far more functional than hostility and bitter partisanship in everything from marriage to politics. Universal kindness optimizes living for all. Hatred and war are the opposite. (See <http://www.youtube.com/watch?v=-evIyrrjTTY>)

21. Optimal Living

When ordinary people decide to do extraordinary things, they transform their lives and the lives of those around them.

—Oprah Winfrey



Happy kids—Wikimedia

Happiness science

Happiness is wonderful. A good, safe, happy, rich childhood is precious.

Understanding human thought processes, behavior and even human happiness, is the job of psychologists.

Psychology gets its name from the word *psyche*. Psyche is the Greek word for *mind*, and “ology” (also from Greek) means science. Psychology is mind science, the science of how we think and feel, how we act and react and why we do things. Think of psychology as the scientific quest to understand ourselves.

Sick minds

Minds can get confused, sometimes so confused that there is a breakdown of the brain’s operating system. Then the person is unable to function or functions chaotically. The study of this is called *abnormal psychology*.

Some psychiatric patients are so phobic that they are afraid to go outside, or are constantly washing because they have a fear of germs. They are often prescribed the light metallic element *lithium* to reduce their phobia. Others are so delusional that they are a threat to themselves or others. Some are mentally torn apart in a delusion in which warring personalities are battling for his or her attention. After I asked one homeless, schizophrenic man to please stop talking to himself so violently, he said, “Do you think I want these men of God jumping in and out of my head?”

Healthy minds

After this kind of observation of minds gone wrong, one has to wonder what makes for

an *optimal* psyche, for the best possible state of one's own psyche?

One of the most insightful, healthy-mind investigators of the 20th Century was psychologist and professor, Abraham Maslow. He laid out a hierarchy of human needs that has caused countless psychology students a major epiphany.

Maslow keenly observed that we all have basic physiological (body) needs that must be met first before we can progress to the higher needs and eventually to the ultimate stage of our psyche's development.

Here is Maslow's list, in order, starting with the most basic:

1. **PHYSIOLOGICAL NEEDS:** Air, water, food, clothing, shelter
2. **SAFETY NEEDS:** Freedom from threat and attack. Survival money or a way to get steady income
3. **BELONGING NEEDS:** Feeling welcome in a group or family. Love of parents, a spouse and of one's children. Camaraderie
4. **ESTEEM NEEDS:** Having natural respect for one's self, and being esteemed by other people raises one's self-esteem
5. **SELF-ACTUALIZATION:** Doing those things for personal development that one previously only dreamed of, if all of the lower needs are taken care of permanently. (Some play the lottery while others go to school for the top paying jobs. Each wants a way to get all of their lower needs met permanently so they can self-actualize more and bigger)

These seem obvious at quick glance, but this also means that an individual can't move on to fulfilling the next need in the order unless the previous needs are continuously being met. (Traditionally, it takes a stable family for many people to achieve this. It can't be done without help.) In other words, if you are gasping for air, you are not at all concerned with your safety later today, or being exiled from your church, or if your children respect and appreciate you, or what's for dinner. First needs first, then the rest. (See <http://www.economist.com/news/britain/21578434-old-industry-deep-recession-sex-doesnt-sell>)

The first big step to the good life

Many people achieve the level of self-actualization, which brings us to Oprah Winfrey's observation that opened this chapter: "When ordinary people decide to do extraordinary things, they transform their lives and the lives of those around them."

We all start out as tiny babies with zero on our internal score card of great accomplishments and awesome things we have done and experienced. What makes the difference later in life? What makes the difference between the one who is still afraid to *go big*, and the one who did *go big* in something or many things? It is simply the all-out *decision* to do it—EVEN IF YOU'RE IN THE LATE STAGES OF YOUR LIFE.

Second step to the good life

Where does the spark originate and *what* makes it ignite fuel in a person that causes them to do bigger things and get bigger results?" It comes from a need for *internal* speed, after getting fed up with the slowness and/or a directionless quality in one's current life. If you never get fed up after shrinking and wasting your life's potential, you never *go big* in your life before it becomes apparent that it's going to end, without doing something great.

What do you want most in life? That is the Big Question.

Next, just decide. What's your *best* answer? Write it down, now. Write below it how you are going to get it. Write it on a note card and put it in your pocket. Write it on a sticky note and put it on your computer screen and on the dashboard of your car. Keep it foremost in your mind by re-reading what you wrote every day, the first thing in the morning, at mid-

day, and the last thing at night. Then *work on it*. The more you see it and work on it, the faster it comes. Re-write it with bigger ideas when you see your goal about to be achieved.

Those who cheat and “write” it only in their heads achieve it slower, if at all. There’s nothing magical about this. If you have no desire, you get no-thing. If you have desire but don’t do anything to get it, you lose. How do you win then? First, study the target to become what you need to be to own it, do what it takes to get it and then you will have it. (Be-Do-Have, in that order.)

Cosmic success story

What does goal achievement have to do with the tear in space 13.82 billion years ago, or the fact that chemicals assemble us? Everything. Here we are! All the processes that have happened in all the epochs of time in the universe and on our planet have resulted in you, and all of us. The only question is, “How do you want to live?” You have major and minor choices available to you. What do you really want? Read what you wrote. Start doing things to get what you want. Then see how many others you can help get what they want in the process of getting what you want. Refine your wants as you go.

Only in your self-actualization that spills over to benefit others’ progress is there *real* joy to be felt. There’s a perfect balance between pure selfishness and pure altruism. Selfishness or self-deprived altruism alone corrupts and spoils the world for all. But when one has more than one needs, the *only* positive thing left to do is help others get what they need. Only a neurotic psychopath continually wants more at others’ expense.

“But I need to belong to a religious group to do good”

On a trip to England in September 2010, ex-Pope Benedict remarked that society risks “a truncated vision of man and society” if god and religion are removed. He said that religion is needed to offer people “guidance and protection in the face of their weakness and fragility.”

Really? Are you so weak and fragile that you and your children need priests for guidance and protection? (See <http://www.snapnetwork.org/>)

The British Broadcasting Company (BBC) asked their radio audience about the Pope’s remarks. “Is there something faith can deliver, that rights, opportunities and reason alone cannot?”

Only freedom from religion, and then using the scientific method have delivered the truth of nature to us. The precious account of where everything came from and how it all works came from free science. Conversely, it is religion that restricts freedom and offers its believers a truncated, distorted vision of life by promising an after-death party as a better deal than this life.

There are friendly, secular groups to belong to

There were. Many were available before the Covid 19 Pandemic. But many clubs, social groups and volunteer opportunities were shut and lost. It’s a new era now. Change can be good. Consider that you don’t need a group! Consider what you fear or have denied yourself for beneficial growth. Can you play a musical instrument? Do you know algebra, botany or mineralogy? Do you know anything about Social Psychology? How about the history of dog breeds? Do you know a useful, second language? Scared? Don’t be. What would it take to get a job promotion or the job of your dreams? Do something. Go big. Don’t hide from yourself. Your call.

22. Win-Win

Distrust all in whom the impulse to punish is powerful.

—Fredrick Nietzsche

Four human games

There are only four, simple ways for a game to play out. The game can be religion, politics, academics, finance, marriage, family relations, friendships, business, international relations, or almost anything else.

WIN-WIN: I Win—You Win. We both get to grow and self-actualize. We are at peace. Prosperity can happen. Entropy, as the wasted energy of conflict, is gone because cooperative enterprise creates abundance and more trust. Life is good when Win-Win pervades a society. But there's another requirement to *maintain* Win-Win. There can be no freeloaders, saboteurs or psychopaths parasitizing the situation.

WIN-LOSE: I Win—You Lose. This is theft, conquest, rape or murder. The winner gets something but loses the possibility of greater prosperity via cooperation that died with loss of trust or the death of the other. Powerful bullies (psychopaths) believe that they, or their ideology gang, or their country, *should* conquer and win over all others all the time. This can create a totalitarian regime of the ruthless and suffers compounding losses rapidly as other potential cooperators are shut down. This is the religious fundamentalists' end game. Their god's enemy must be destroyed so that they can win the battle as their god's special team of true believers.

LOSE-WIN: I Lose—You Win. This is conquest or rape again, only in this game the opponent, the aggressor, is allowed to win by the loser, the self-chosen *victim*. The winner loses the possibility of contribution toward greater prosperity that died with the other if the game is fatal. Weak and naive people often believe that they, or their country, *should* lose to set a moral example, atone for our collective sins, or learn the bogus lesson of peace-at-all-costs. In *wanting* to trust Hitler, the British leader Neville Chamberlain proved the peace-at-all-costs idea to be naive and fatally flawed. Hitler immediately seized more countries because his opposition was weak-minded and did not militarize itself to provide a deterrent.

LOSE-LOSE: I Lose—You Lose. This is the game of "If I can't have it, you can't have it either." It becomes mutual hurt and pain. It's the game of sociopaths and Islamic suicide bombers. It became the game of both Germany and Japan near the end of World War II. Hitler finally drafted young boys, gave them rifles, and threw them at the tanks and armies of The United States and Russia. The Japanese emperor had women and children trained to try to kill any invading American soldiers using only sharpened bamboo sticks.

Beware of people programmed for Lose-Lose

"I am scared, alone and confused, and my reaction is to strike out toward the perceived source of my misery, society. My intent is to harm society as much as I can, then die."

This was a May 11, 2005 post on a fugitive sex offender's (sociopath's) personal website found by police investigating the murders of a family and the abduction of their two smallest children. His was a heinous game of Lose-Lose.

Divorcées often play their game as Lose-Lose, and so did Saddam Hussein's army when retreating from Kuwait in lighting all the oil wells on fire. It was the scorched earth policy of "If I can't have it, I'll leave it in flames for you." At its worst Lose-Lose is nuclear war (both sides die). But there are two ways to avoid this worst of all syndromes. "If you can't beat them, join them," is the simplest way out. But if you absolutely cannot join them because to do so would make the world a worse place, then you can only eliminate them before they eliminate you (Win-Lose).

To avoid Lose-Lose war, the *Powell Doctrine* prescribes using overwhelming force first. This shortens the conflict with fewer casualties. A powerful preemptive attack can work to get to Win-Lose before mutual annihilation. Then it can turn quickly into Win-Win if the defeated opponent or nation is aided or rebuilt by the winner, as Japan and Germany were after WWII by the United States. Inaction often leads to protracted war, resulting in massive Lose-Lose. Inaction, or advocating peace-at-all-costs, can merely delay a conflict making it extra bloody and much longer lasting, like World War II was for the British after their naive, pacifist prime minister, Neville Chamberlain, placated Adolf Hitler instead of confronting his military aggressions. More recently, European leaders placated Vladimir Putin when Russian forces first invaded Ukraine.

If these four outcomes, and the goal of achieving Win-Win, were explained to children worldwide in their early school years, the world would greatly improve when they came of age to run it.

.....
Note: You could claim that there is a fifth possible outcome called a draw, however, it's not true. Playing a game and having no gain for anybody is Lose-Lose. You both wasted your time on something with no benefit for anyone.
.....

Speaking of Psychopaths and Sociopaths

About 3 percent of men and 1 percent of women have antisocial personality disorder (ASPD). It ranges from the kid next door robbing a neighbor to the butcher of Ukraine, Vladimir Putin, and every crime-loving thug in between. They have no empathy for others and see others as expendable. They want and try to get what they think will benefit only themselves at any cost to everyone else (maybe even their own offspring). Often the worst of them have to employ lessers of their kind to achieve their goals. Mafia.

Now ask yourself: Do I know any leaders who have bilked their naive followers to acquire wealth, private jets, huge mansions, sex partners, political power and fame? Are not all big corrupt governments, religion organizations and jihad groups just mafias of ASPD types? (It's not the naive seeking a group to belong to that come up with a scheme to exploit you and your family and others. It's the ASPD types every time.)

What to do? Create an incorruptible system of laws that removes psychopaths and sociopaths from power. A big step forward would be to remove "freedom of religion" from it's unlimited power to lie, cheat, steal, corrupt and enslave believers. Radical or obvious? Both, and necessary for humanity's immediate and long-term survival.

Now the important point: There is no god. Gods are the invention of godmen who bilk their followers in the name of a god to achieve their personal quest for wealth, power, prestige, sex and control of others. They are--*always*--the ASPD types, bold, adamant thugs in respectable attire, usually with private security, bodyguards to protect them. And they only have to use previous godmen's traditional holy books to hook their own followers as supporters. It's the wolf and his mesmerized sheep. Why and how can this continue? Because that's the way things have always been done! Any objections and you will be an outcast in conservative religious areas.

23. Human Potential

The world is moving so fast these days that the [person] who says it cannot be done is generally interrupted by someone doing it.

—Elbert Hubbard

Access to all knowledge is a human right, period.

—Jimmy Wales

Genius

Albert Einstein was a secular Jew, not a worshipper. His theoretical discoveries lead to the atomic age. The first nuclear weapon was created based on his equation $E=Mc^2$. This equation showed that the potential energy inside an each atom equals its mass times the speed of light multiplied by itself. That revealed that there is tremendous energy inside matter, especially very heavy, radioactive metals like uranium and plutonium.

With few exceptions, the 20th Century really was the century of the Jewish scientist. Those scientists were often opposed to their familial religion's ideology and were Jewish only by family heritage, not in a messianic worldview. Many Jewish parents in Europe and in the United States placed a very high value on learning and advanced education for their children in the 20th century. That paid off big. Many remarkable scientists came from those parents and produced much of our medical and technological advances.

Knowledge is strength

When you know something and can prove it, you're strong. We can strengthen ourselves by gaining proven, scientific knowledge, thus refining our intellects. How? Go register for college science courses. In the alternative, just read more. Read better material. It's quite easy. Read recent college textbooks for fun. (Find them at thrift stores.)

Life is dim, heavy and troublesome for those who have no education in scientific concepts, human history or psychology, like so many the world over who have only religion. The person who is only familiar with religious stories and doctrines feels lost and defensive when others are talking about science and its discoveries. Many left-in-the-dark people then tend to cover up the resulting feeling of inferiority with a defensive display of superiority. "We're right. You're wrong. God's on *our* side."

It doesn't matter how slowly you start. Strength comes from knowing how nature really works. One only has to get beyond the fear of being called a traitor to the old religious ideology that *has you* and wants you to stay stultified, firewalled, locked closed.

What could you do?

Explore <http://www.wikipedia.com> daily. It's the biggest, most constantly-updated and corrected encyclopedia ever. "We constantly have to make an effort to explore the world anew—even if that means just looking at Wikipedia more often," says mathematician Samuel Arbesman. (Go ahead! Check yourself: <http://www.csmonitor.com/Science/2011/1209/Are-you-scientifically-literate-Take-our-quiz/Composing-about-78-percent-of-the-air-at-sea-level-what-is-the-most-common-gas-in-the-Earth-s-atmosphere>)

We are living in the most knowledgeable era that humans have ever had. Why not dive in and understand how everything works? Your grandparents and all your ancestors didn't have this opportunity that you have to understand the universe!

You and a team could convert churches, synagogues and mosques into genuine learning centers. Take all the good and wholesome activities that the religious congregation offered, eliminate the supernatural and simply change the theme and content to the truth and fellowshiping. Imagine church, synagogue or mosque without supernatural beliefs fouling people's understanding of life and not restricting their access to life's real information. Inviting knowledgeable, eloquent speaker-presenters will make meetings far more interesting than hearing tall tales from reworked, ancient scriptures. Developing your skills, you can also be a presenter and teacher. (See Appendix B, #16) The world needs you.

Is this likely?

Not without wanting a better future for the world and then acting on it. You can organize a non-profit, educational group. Meet in homes. Buy and convert a church to a secular fellowship. Invite guests and scientists. Make it fun and fascinating. Add music and music training on instruments. Engage the children and adults in Sunday Science School.

To help, scientists will have to stop thinking of their careers and responsibilities as niche jobs. They like their advanced status in society but few impart knowledge directly to the public. Many are dismayed by the growth of church groups that threaten the teaching of science in public schools. They also fear being science *popularizers*, as if that were a negative. It's not. It's an imperative, and it requires developing one's communication skills.

"We have a civilization based on science and technology, and we've cleverly arranged things so that almost nobody understands science and technology. That is a prescription for disaster," said astronomer Carl Sagan. (See <http://i.imgur.com/SJfTrr5.png>)

The mission: Introverted scientists aren't likely to start fellowships that will feel emotionally warm while teaching the masses the way things really are in nature. That's your job. Get help. Make it happen.

Back to school

There are *free*, Internet-based, college and university course offerings. The personal growth and self-esteem increases of getting more education are immense. (See Appendix B, #5 and <http://www.smartplanet.com/blog/pure-genius/the-future-of-education-byte-sized-and-free/8509?tag=nl.e662>)

Once educated in the sciences, you are armed with the multiple proofs of what reality is and the methodology to get more proofs and understanding. Once you become knowledgeable about science facts, you become capable of liberating others into the understanding of how things really are. You could make a career of it. Why not counter the tens of thousands who have religious careers preaching the anti-physics and selling admission to a make-believe afterlife! Picture tens of thousands of science trainers running all the converted churches, mosques and synagogues for the benefit of humanity.

But what if you can't learn or remember easily?

One of our biggest problems is our inability to learn easily and to remember. Daily exercise and good sleep help the brain function better. Something special: There is also a food, a plant that is known to enhance information retention and recall. Some people take capsules or tablets of freeze-dried blue-green algae (*Aphanizomenon flos-aquae*) for these benefits. A Swiss research laboratory isolated a chemical compound found in these algae called *Nostocarboline*. It is a brain chemical important for memory and thinking, noted The American Chemical Society. (News release, American Chemical Society, 2005)

Stress free

Since our ancestors lived in caves and developed complex language, we have been sharing information as storytelling around a campfire. The Internet is now the world's most universal campfire for information sharing. It can change everything. Education in the future will look like this: A student will *play* a course of study off an educational website. He or she will see and hear the concepts of the course being taught. Gone will be the sit-down lecture from a professor in a classroom scribbling on a board while student try to take notes frantically. This will also allow genuine market forces to bring down the enslaving, stratospheric cost of tuition and textbooks for students.

Education will no longer keep treating students like products coming down an assembly line, constantly grading and culling them like inanimate objects instead of nurturing their minds. If we grew crops this way we would rip half the crop out of the ground for being less promising as sprouts. Society needs every one educated, not cast out to join a cult or gang for a place to belong isolating themselves from genuine education.

If students have the smarts to be admitted to colleges, they should *all* be educated and graduated when competent. But fierce competition has no place in learning. It's counterproductive to apply intense stresses to students *during* their learning process. Learning takes place best in a civil, enjoyable, caring, stress-free environment. But academics are stuck in the old idea that an adversarial climate is best for learning. Why? "Because that's the way it's always been done around here," and what was done to them.

Church colleges

Where's the exhilaration of learning in an adversarial, batch-processing system? It's gone for those thousands of college students who drop out. But churches found a better way. Ironically, the U.S. colleges that have the least stress, the kindest atmosphere, and that are still affordable, are often those that are run by religious organizations!

But there's a big down side. Dozens of church colleges and universities are now regionally accredited in the United States to award degrees without students ever once taking a course in logic, critical thinking and real science. Students can study their own religion. Accreditation organizations receive money from church colleges paying dues and fees.

Church colleges are excellent places to find faithful spouses who want children. (See [http://www.ehbonline.org/article/S1090-5138\(08\)00042-1/abstract](http://www.ehbonline.org/article/S1090-5138(08)00042-1/abstract)) But the required belief in theology makes these schools highly disinclined to teach theology-conflicting sciences.

All institutions are seeking to thrive and expand to encompass more people as their money-giving members or customers. If they can't keep growing, these institutions at least want to survive. If their survival is threatened, they often behave just like individuals. They protest and fight, even when their usefulness to the members or customers has become a negative. All organizations, including churches, are in a Darwinian struggle to survive by retaining their paying members and getting more before some competitor gets them for its survival. The faithful leave during scandals. (See <https://www.fox13now.com/news/national-news/4-takeaways-from-aps-mormon-church-sex-abuse-investigation>)

A bad trend & how to fix it

The Fordham Institute report on the teaching of science in U.S. public schools (2005) showed a large decline in the teaching of science in most states. It warned that most children in the United States will not be able to enter into technology-based jobs without higher standards in the teaching of science and math. It gave thirteen states an "F" and eight a "D." Overall, the U.S. received a "D" (1.84 GPA) in the teaching of science. Michael Petrilli of the Fordham Institute said, "In order to succeed, they [students] will need to be able to do a higher level of math and science than they can do today."

In Great Britain, The Council for Industry and Higher Education released a report asking the government to do something to fix the shortage of qualified employees in the nation. The council's report suggested that the government pay students to study the sciences.

Hook yourself up

Every student needs custom treatment in all learning environments. We always had custom treatment throughout human history as tribal home schooling, apprenticeship and mentoring. Technology can now provide much of this. There are advanced video games that teach players real world science and medicine. The day of the universal education for all of us is coming. Eventually, everyone will be able to know everything that's known and how everything works. When this technology arrives, ignorance will go away fast. In the meantime, one has to go get the big, real education for oneself.

Without being burdened for life with crushing student debt, you could start here online: <http://www.khanacademy.org>. In late September 2010, Google announced that it had given the Khan Academy a \$2 million grant to expand its course offerings. It's now huge. You and others could even start your own education-sharing group. (See your local librarian for a free room to meet in. Libraries want and encourage this activity.)

Life is short. Why not take yourself to the highest level? In what subject do you lack the most understanding? Start there. (I feared learning music theory, so I have taken it up.)

Education is everything. The alternative is cluelessness. Only the educated are free to know what's really going on, the way things really are in nature. William Yates realized that, "Education is not the filling of a pail, but the lighting of a fire." You light it. Then it lights up your life for the rest of your entire life!

Still fighting for god?

Many people cannot overcome their indoctrination to escape into a life of genuine discovery and a comprehensive understanding of how the universe works. Arguing for their god and their religious indoctrination they say, "Lack of proof isn't proof of absence." So, little green men from Mars who eat red rocks exist until you prove they don't? No. Extraordinary and irrational claims require extraordinary and rational proof.

Self identity

There are three states of personal development that people fall into. The first is backsliding. Daily life consists of doing bad by oneself and by others. (Drugs, crime, hatred) The second is stuck, not moving. Daily life consists of the same old job, attitudes and lack of stimulation. The third is progress. Daily life is purposeful, stimulating and makes benefits. To get out of backsliding or static, one has to willfully change one's group identity, something better, more desirable than the previous group identity. Self identity and progress will follow.

There's also another game changer going on for each of us. As each day of life goes by, we are constantly aging. Our self identity gets changed for us as we compare what we looked like 10+ years ago to our image today. This is biomechanical. It will keep happening until you look like a raisin and die of old age. What you can change—enhance—is your own capabilities now. Increasing your capabilities for effecting good is the optimal game in life. You decide to be an enhanced version of yourself, not the same old you. You change your identity optimally by affiliating yourself with the most advanced group. (Scholars not ideologues, politicians or criminals.)

What if you want out of the old group you're in and out of their deep rut? How do you get out of the old group identity that has been heavily imprinted on you? Take drastic measures if there's no other way: Get lost to that group. Change your name in court. Change your address. Change your hairstyle, manner of dress and what you read and think about. This is self re-engineering and freedom.

24. Kindness

I kill you! I kill you! I kill you!

*—Sudanese-American soccer player who lost the ball
to an opponent in a casual, adult game*

My religion is kindness.

—The Dalai Lama



U.S. Government photo

Temperament

Temperament means disposition, attitude, mentality, nature, outlook, personality, quality, susceptibility, temper and tendency.

You are your temperament. You are also—to a greater or lesser extent—your generation's, your family's and your peer group's temperament.

Whoever abused you repelled you from things associated with him or her. That left you with anger, a desire to seek revenge and thus you formed some or much of your temperament as opposition to something. But whoever took you in and nurtured you left you with a sense of belonging to them and their group, good or bad. Religion takes people in and nurtures them to grow its base of defenders and supporters. If the religion honors violence then even the smallest insult can provoke large-scale violence by spontaneous defenders of that faith.

After the riots and attacks on Danish embassies in Lebanon and Iran because Danish newspapers had printed cartoons of Islam's founder, the imam of a Copenhagen mosque, Ahmed Abu-Laban, said:

The cartoons are merely the final drop that caused the cup to overflow. The Muslim faith has been under attack for years. There has been intense psychological pressure on Muslims... We have heard Western politicians relate our faith to terrorism, over and over again, and it is too much.

All believers in supernatural, religious worldviews are under intense mental pressure to self-correct. Pressure is good. The gap between the real world and what believers want to think is real creates this pressure in them. All believers are at a crossroads in their lives about what to consider real. The sacred, supernatural beliefs are becoming more and more unbelievable and absurd, therefore much more burdensome. Expecting the supernatural return of Jesus or a sexual afterlife with virgins does not fit with plans to make the world a better place, or to advance science or to expand human settlements into space. Worse still, when believers demand others' respect for their scriptures and conformity to their religious rules, the world doesn't need more freedom *of* religion. The world needs freedom *from* religion. (See https://www.youtube.com/watch?v=r_5yUXjXizQ&feature=youtu.be)

A sense of belonging to a good group

Joining a religion has been known to change the temperaments of wrongdoers who were out for personal gain at any cost. Religious conversion has been known to render the converts peaceful, purposeful and altruistic. This kind of religious change-of-heart even helps governments, because it controls people semi-efficiently, doesn't threaten the rulers and requires less police, prisons and courts.

The Roman citizen, Saul of Tarsus, converted. He changed his group identity. He even changed his name to Paul. He felt he was a new person with a compelling mission to convert everyone. He quit being a persecutor of Jews for Jesus and became their staunchest advocate, their new leader and organizer. The Romans eventually killed him for it. Roman government felt threatened by the social change that his Messiah Jesus views were causing. Yet, just 300 years later, the Romans quit torturing Jesus believers. The Romans became Christians, operating largely by how Paul had organized the new religion into hierarchies. The Romans altered their group's temperament and identity, based largely on the writings and example of Paul. They became kinder and gentler. This resulted in The Roman Empire and its gods declining. To survive, Rome had to become the center of this religion. Jerusalem was merely a distant outpost, so with the installation of a perpetual line of popes in Rome, as head of the church, Rome retained power over much of its empire.

Rome and Romans still remain the center of the Christian story line, even for all the splintered Protestant churches. And the Pope, like the Caesars, still sits on a throne in a palace in the city of Rome as the earthly agent for a Jewish god (Yahweh as Jesus the itinerant rabbi) who is worshiped on the day of the Roman sun god, Sunday.

Muslims have ornate mosques. Mormons have opulent temples. Seventh-day Adventists, Jehovah's Witnesses have humble church buildings. Baptists and Pentecostals have mega churches. This is all for the perpetuation of beliefs in the supernatural. Is there no place for escapees, rational people and science-oriented people to gather and make a community? (See Reddit.com for ExChristian, ExMormon, ExScientologist, and others.)

Jesus

If there actually was an itinerant rabbi named Jesus, his death was between 29 AD and 40 AD. The Book of Mark was written after the year 70 A.D. The books of Matthew and Luke were written in the 80s A.D. The Book of John was written by someone in the 90s A.D. or later. The first followers of Jesus included Matthew, Mark, Luke, and John. They all died before they wrote any account! (See <https://www.answers.com/search?q=when+were+the+gospels+written&filter=all>)

Then why did someone put the names of four of Jesus' friends on those Bible books? Using their names gave the books great credibility with the believers. To get more worshippers, the anonymous writers embellished Jesus to be even more supernatural than the Roman and Greek gods in all the legends spun about them (walking on water, rising from the dead, levitating into the sky).

From the claimed quotations of Jesus in the gospels, it's obvious that Jesus never intended to replace his Jewish religion with another one of his own invention. He was a wandering rabbi. He never proclaimed a new religion called Christianity. The apostle Paul (Saul of Tarsus) did that years later.

Jesus' quotes in the gospels indicate that his motivation was humanitarian and political. His character was such that he wanted people to treat each other kindly and benevolently. For that reason, he also wanted his people and culture liberated from the brutal Romans. Jesus didn't come in like the expected messiah warrior king with a big army and conquer the Romans. He didn't wave his hand and supernaturally vaporize the Romans. He got captured and killed by them.

The writers of the four gospels invented the miracle stories, and slyly changed Jesus' mission from being against Roman brutality to otherworldly and supernatural. (Judaism has no afterlife theology!) The writers even made up supernatural stories for Jesus that had previously been told about the Persian god Mithra, who was popular in Rome prior to the time of Jesus. This gave the deceased rabbi Jesus more appeal with Romans and other non-Jews. It kept Jesus' core ideas alive and spreading, long after his death. The Jews and early Christians needed to bring down their Roman oppressors. The struggle could not be won by using swords against the Romans. The Jews had already tried that and lost. Rome could only be conquered by using a more powerful, subversive, contagious, supernatural god story on the Romans. It worked over time!

In martyrdom, the ideas of Jesus, Paul and other leaders spread far and wide. Four hundred years later, the ideas of Christianity had conquered the Roman Empire by unrelenting story spreading, kindness, recruiting and fellowshiping. The masses abandoned all of the old Roman gods. Roman theology evaporated. Many people wanted a better society, with cooperation and kindness over the Caesars' ego, slavery, and brutality. But this didn't last for long, as ego, slavery and brutality became part of how the church leaders spread their personal dominion using Christianity, especially during the Inquisition in Europe and the conquest of the indigenous Amerindians in North, Central and South America.

Your character

Are you selfish and power seeking, out for your own gain at others' expense? Do you want to kill people who don't worship the right god? Or were you raised to be kind and helpful toward others like Jesus taught?

Some Jews and Christians claim that it's more important to work on one's character than one's intellect. But if one grew up in a devout, anti-science family, one's character has likely not gone untended. One's intellect likely has. Self betterment, honesty and altruism are the core components of good character. Self betterment includes learning and understanding how things really are in nature, learning the truth.

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Note: Keeping people from knowing how things really are is immoral and could be criminal. It's fraud to take believers' money promising them supernatural benefits that requires them to be dead first! It's like being sold a life insurance policy where you are also the beneficiary: The insurance company promises to pay only you as soon as you're dead. It's a worse scam than a Ponzi scheme. Why? You can't sue the religious leaders for fraud because you're dead! They get away with the fraud every time. It's a brilliant scheme with complete immunity. All they have to do is demand respect for religion and laws protecting the practice of their religion to keep their fraudulent business model going.

.....

Beyond just simple acts of kindness, good character means helping others when one has something to offer. We cannot be helpfully altruistic above and beyond basic kindnesses when we don't know much. Who would benefit? One could make things worse naively trying to do good. Gaining accurate knowledge and gaining the skills to help others must come first. Science education is super important. People have questions. Accurate answers have to be the only answers, not make-believe and outright lies to protect a incorrect, traditional view.

Something extra special

The formula for optimal character, civility and progress, known as *The 4-way Test*:

"Of the things we think, say or do:

- 1. Is it the TRUTH?*
- 2. Is it FAIR to all concerned?*
- 3. Will it build GOODWILL and better FRIENDSHIPS?*
- 4. Will it be BENEFICIAL to all concerned?"*

This trumps both scriptures and law. Imagine if all of us were instilled with this from childhood and it was applied in civil law. (See Appendix B, #14)

"My religion is kindness"

The Tibetan Buddhist monk, the Dalai Lama said, "My religion is kindness." That's radically simple and highly attractive. It's immediately a very powerful, contagious idea. It attracts people like an emotional magnet. With it comes cooperation, not domination or murder. (See Appendix B, #7)

"Kindness is the grease that smooths out life's daily grind," states one church's sign. Kindness is what most people need and seek. The churches, synagogues and mosques make attempts to provide it, but their guiding scriptures are tainted with ancient stories of enemies, vengeance, wars, inquisitions, murders, slavery and the incineration of the world.

The adversarial and competitive nature of our education system does not promote kindness either. Even many atheists are negative and detrimental to themselves and others. What to do? Transform the people you meet with kindness and share this book with them, even atheists. In just one generation we could transform all institutions into places where people experience and learn a deep sense of kindness, and positive personal purpose. We could start by making *The 4-way Test* the foundation of all government activities and the foundation of our laws. We could make it the core of the mission statement of every business, every government body, every school and every college and university. Really.

There's a time for war and a time for peace. Imagine war planning based on kindness and *The 4-way test*. The planned outcome would not be just to defeat the enemy, but flip them and optimize them in a new, inclusive, cooperative order benefiting all concerned.

25. The Future

Nuclear War and the Second Coming of Jesus Christ

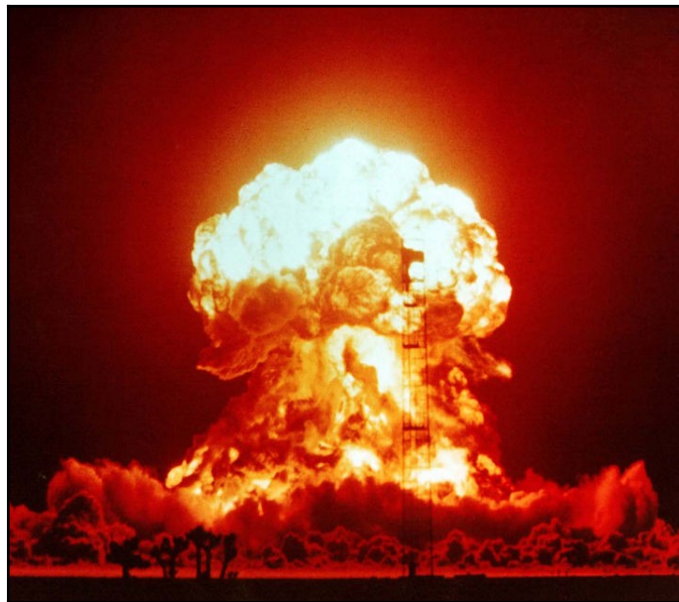
—A book by Pastor Jerry Falwell (Christian)

God ordered us to attack the infidels by all means...

—Abu Musab al-Zarqawi (Muslim)

***For you don't count the dead
When God's on your side.***

—Bob Dylan



Thermo-nuclear bomb explosion - U.S. Government

Facing the obvious

“...the *Bible* is a fallible, flawed, highly inconsistent history book that has been altered hundreds of times. There is zero evidence the *Bible* is the holy word of God. In fact, there is zero evidence 'God' even exists,” wrote L.S. (See <http://www.godisimaginary.com/i1.htm>)

The creator” is just Mother Nature, the laws of physics processing over 13 billion years. And here we are! Order evolved from chaos. (See <https://www.youtube.com/watch?v=NIH7aXOPBds>)

When emotion shapes your reality

No one can predict the future, so “prophecy” is impossible, but masses of people still believe that dire prophecies from ancient fiction writers (now called sacred scriptures) are inevitable. Nuclear Armageddon is the worst possible of these self-fulfilling prophecies. Believers would perish in a zombie-like aftermath along with their religious enemies who are hallucinating on a different holy book. No rapture. Just horrible death.

When Evangelicals call nuclear war “a sacred prophecy,” they are half-wittingly conspiring to commit mass murder. The sacred is life continuing! Life should go on, not end because an intense religion infects peoples' minds and amps up their emotions. Fundamentalist Christianity and Islam also instill a stress disorder, a program that haunts believers' emotions with the threat of excruciating torture. They preach that denying their true faiths—the programming—is sinning that will send a believer to Hell with Satan, where one burns for eternity without reprieve, instead of being immediately incinerated.

When religious emotion shapes your reality, the cosmic reality for an individual can get very self focused. After winning the Miss Universe pageant, Pia Alonzo Wurtzbach wrote, “Thank you, Lord. Everything makes sense now. In God's perfect timing.”

The end of theology

Becoming an atheist is like realizing that the entire world is basically one giant insane asylum and that practically everyone is nuts. —SageOwl on Reddit

Religion has morphed and mutated a lot through the ages. (See http://www.huffingtonpost.com/ryan-austin-fitzgerald/what-is-religion_b_8760882.html?ncid=txtlnkusaolp00000592)

Monotheism's three virulent groups of believers are split into two opposing camps: Islam versus Christianity and Judaism. Each believes that the god of Abraham hates their enemy! Worse, Islamists and Evangelicals believe that a final holy war is imminent, ready to rain nuclear fire and radioactive pollution on wrong-believers everywhere. It will happen if Pakistani and/or North Korean nuclear weapons get into the hands of Islamists who are fueled by a violent interpretation of their holy book by fundamentalist clerics in Saudi Arabia. (See <http://www.thedailybeast.com/articles/2016/02/29/the-american-quran-pissing-off-the-saudis.html>)

Christian fundamentalists also want their idea of their god's will: nuclear war with Islam which, they believe, will force Jesus to return to Earth (from outer space) and take control of politics and magically restore the war-destroyed environment to a pristine state.

If Islamic fundamentalists explode nuclear weapons in the West, the U.S. and Israel (Christians and Jews) would surely retaliate with nuclear weapons. The skies would go dark with smoke. Survivors far from the explosions would wander around what's left until radiation sickness brought a hellish end to everyone. (See: <http://www.documentingreality.com/forum/f10/hiroshima-nagasaki-victims-31990/>) It would be a zombie apocalypse, not a holy rapture. Christians who are left would wonder where Jesus was, still expecting him to return in glory any day now.

“The survival value of intelligence is that it allows us to extinct a bad idea, before the idea extincts us,” said Karl Popper. (See Appendix G)

The most *unintelligent* thing to do is to continue respecting and exempting religions. Leaving insane ideas loose to infect more minds to kill for god becomes fatal. Ignorant believers—crazy with blood lust for their religious enemies—all want weapons of mass destruction for this war. How to stop it? We must stop respecting and accommodating religious beliefs. All religious beliefs are relics from past, ignorant societies which makes today's heavily-armed believers in those religions highly dangerous.

26. Debriefing

Unhook yourself from who you were. This will let you be pulled forward.

—Thomas J. Leonard

The Big Three Questions

There are three questions that Mormons, Christians, Jews and Muslims have claimed to have the answers for, but don't and never could have had. Here are the three questions with the tested and proven answers.

Where did we come from?

The universe operates mechanically and self-organizes mathematically within the laws of physics. The law of gravity is the heat-making machine that causes particles to come together as stars and galaxies. The second law of thermodynamics (entropy) causes particles to spread out and cool. On our warm, wet, “Goldilocks” planet, the natural world consists of intertwined lifeforms that are built from chemical elements that were generated first in the Big Bang. Some were later made heavier in star explosions. The first chemical replicator began randomly. Its descendants (bacteria, insects, animals and us) keep replicating on a wet planet a comfortable distance from a heat source (the Sun). Complex chemical reactions built all of life by successful random changes—because they could—within the laws of physics and the immense abundance of time. The process has taken the last 13.82 billion years to produce *us*. That’s where each of us came from. (See <http://www.bbc.co.uk/timelines/z9hwjxs>)

Why are we here?

Because half strands of your parents’ DNA combined to assemble you chemically inside your parent and because of the laws of physics behind those chemicals joining together you developed. You were born, grew and have a life that requires you to eat other life products to stay alive and thrive.

A friend objected to this. He said, “That is *how* I am here, not *why*.” Wrong! Think about it. Half strands of DNA coming together from the parents are both *how* and *why* we are each here. The honest answer can only be mechanical, not philosophical or theological. The *why* is chemistry. *Why* you and I are here is because the universe does chemistry. That’s the bottom line of why we are here. (See <https://en.wikipedia.org/wiki/Astrochemistry>)

But what about having a higher purpose? As long as you live, you can have a higher purpose, if you chose one or more. The people who have chosen the sciences as their higher purpose have helped us all immensely. They investigate and solve. They deliver the benefits.

We all need the basics required to sustain our lives (food, shelter, clothing, belonging, love). Then we want things and experiences beyond these basics. This reaches a peak in *self-actualization* for those who have all their basic needs in life met. They can do some amazingly wonderful things to benefit others for the sheer joy of achieving them before dying. That’s the moral value of why we are each here. We can each chose to do things that challenge us, and that make us more complete and positive-purpose driven, which spill over to helping others. Help others because there’s no deity to help anyone. You’re it. All good!

It’s amazing how simple and positive life becomes when you’re not being fed a constant religious guilt trip that undermines your self worth and your ability to leave the world a better place than you found it.

Where are you (and all of us) going after death?

Nowhere. Star dust to star dust. Life isn't some kind of practice game for anything else. Afterlife stories are fictions created to recruit and lock in believers in this life to fund the beneficiaries of beliefs, the religious and political leaders. (See <http://www.freerepublic.com/focus/f-religion/1869498/posts>)

Depending on which belief system may still have you hypnotized, hooked and defending it, your initial response to dropping your religion may be one of these:

Mormons: *"Our heavenly father loves you and wants you to join us in the Celestial Kingdom after the Judgment Day, so you need to accept Joseph Smith as a true prophet of God, be baptized by an elder in the church, pay your tithing, come to church with us and get married in the temple for time and all eternity."*

Evangelical Christians: *"I'm not giving up on my God or my church family! We are all going to see each other again in Heaven in a big reunion after Jesus returns in glory and the dead are resurrected from their graves. The Bible says so. Save your soul and join us. God says to accept Jesus as your personal savior or he will ban you to Hell for eternity." (Note: How does god sacrificing himself to himself to save you from himself make any sense?)*

Ultra-orthodox Jews: *"We can't. It's our culture. We're in way too deep. But our son is a professor of physics at Tel Aviv University!"*

Islamists: *"You infidel! You insult Islam. Read the sacred text. You must submit to the will of Allah and accept Mohamed as his prophet. Join us or face our wrath, god willing."*

Religion Accommodators, Agnostics & New Agers: *"All religions are good and lead to the same place of spiritual consciousness and require respect. Just leave everyone to their own spiritual growth. Can't we all just get along?"*

No. Why? Look around. It's about conquest. The god ideas program believers to favor ignorance and to promote conquest for their ideology. Gods have been replaced with different gods in the minds of believers over generations. From believing in Anubis to Baal to Sol Invictus to Yahweh to Christ, god extinction happens. Extinct yours and you're liberated.

The "sacred scriptures" are just primitive, war-loving stories. Can you rid your mind of them? The religion, the ideology, will fight for survival in your thinking, making you feel guilty. The group won't want you to escape. But you have to put distance between you and the believers if you want sanity as a rational, honest person. You have to leave them if you want your thinking purged of all the errors they programmed into you. (See Appendix J)

The real revelation

A man who herds sheep is a *pastor*. A man who heads a church is also called *pastor*. Sheep just exist, grow thick coats and follow the ram, the male of the flock or a pastor. Before church pastors, tribal males called shamans, priests, prophets, seers and holy men, led and reinforced their people's supernatural beliefs. Some were often drunk on wine or delusional from fasting and praying for days. They dreamed, imagined and crafted the stories of all their gods. Some had moral agendas to organize their tribes more effectively. All felt that their message merited lying about the source. They said that the god spoke directly to them. It worked. People followed like sheep. The leader gained power, job security, even wealth. Religions with fantastic, supernatural stories became the best way to

organize and control the masses. But it's turned to chaos for the masses. ISIS and other Islamic militias are beheading innocents and destroying families in Syria, Iraq, Afghanistan, Tunisia and Libya. In Nigeria, Mali and Chad, an army of murdering Islamists named *Boko Haram* is doing the same. Their name means "Western education is forbidden" in their language, *Hausa*. They aren't Arabic-reading, Quranic scholars, but they think they "know" what the god wants. (See <http://www.ibtimes.com/boko-haram-has-killed-600-nigerian-teachers-displaced-19000-teachers-union-2128622?rel=latest3>, then this: <http://en.m.wikipedia.org/wiki/Mu%60tazila>) Ignorant people in the U.S. also want their idea of their god's will: to ban science education and replace it with their rigid religion's view of how things should be. The last time religion dictated education in the world it was called *The Dark Ages*—1,200 years of no science, thus no sanitation, just plagues, prayer, murder and corrupt clergy.

In our age of space telescopes, all of the ancient religious texts now read like a series of bizarre stories. We have acquired the capability to do what the people of the Old Testament era would have considered the powers of their god. We fly places. We write on stone and metal with lasers. We heal the sick. Science—not religion—got us this knowledge and these technologies. Science education is the only way to comprehend how nature is arranged. The science-based worldview is the *it-all-makes-sense* view of everything.

"You do realize that education is futile, don't you? You realize anything which contradicts 'faith' is rejected out of hand," railed a friend, exasperated with the zombie-like Bible believers all around him. But people educated in the sciences are the most likely to quit believing the nonsense. (See <http://www.economist.com/news/international/21623712-how-education-makes-people-less-religiousand-less-superstitious-too-falling-away?fsrc=rss>)

Science education works. It just works way too slowly. It needs more people to make it work faster. Besides, reality contradicts faith daily: No angels land. No burning bushes speak. Prayer doesn't raise the dead, only money. The only things that ascend to high heaven are man-made rockets. Conditions are now ideal for *rational thinking* to replace *believing*. Even many pastors are already secretive nonbelievers. What can they do once they have the visceral realization that they just can no longer preach the excruciating, toxic negativity of Hell, crucifixion and Armageddon? They can tell their congregations the truth, apologize, then earn an income doing something honest and helpful. (See <http://clergyproject.org>)

The realization

The universe exploded out into existence. Gravity works. Hydrogen was the *creator* element. All heavier matter is made from it. Fusing in the Sun, its heat and light shine on our wet space rock planet causing water to evaporate, rain to fall, and life to grow. Living things flourish. Breeding is compelling. New humans are born. A tiny few manage to become good investigators. They eventually figure out everything and we all eventually realize that there never was a scary, vengeful, creator god who lives in the sky. There were only *ever* career prophets, priests, rabbis, ayatollahs, warlords, imams and pastors living off of their entranced believers with the story of a scary, creator god and an afterlife.

The old religious scriptures are just old, bad fiction with horribly ill effects for believers individually and for all humanity. But your life counts. The stuck believers' lives count also. There's life after believing in the god fiction. It's a good and honest life that can be lived to the fullest in joy and kindness. Theology is clearly the biggest, most audacious fraud being committed today. The more people abandon religion and learn how things really are in nature, the fewer there are to plot and execute WWII for a non-existent "heavenly daddy," in his gated, retirement prison in the sky. (See Appendix I)

Believers' Fate

The fate of religious believers is to waste their lives believing old world concepts of spirits, heaven, hell, god, angels, magical powers, et al., instead of knowing what is real. Believers are trapped, stultified.

You now know the truth, so reject the theology and replace it with the tested knowledge of how things really are in the universe. And please give this book to others. Email it to them. Put it on memory devices and hand it to friends. Put it on websites for download, free of charge. (Without making any changes, permission is granted.) That will cause some of them to get free. They will cause others to get free. The numbers of freed people from each religion will grow exponentially. The fraudulent claims of the religions will no longer work on large groups including some of their former leaders. War and genocide for an imagined god and his heavenly afterlife will become unpopular ideas, finally. There's no contribution greater than working for the survival of humanity when its survival is as threatened as it is right now by religion. Your turn to help.

"Religion, in the best case, gives you 'bad reasons' to be good, and in the worst case, gives you 'good reasons' to be bad." (Sam Harris) Religion was useful to leaders for controlling believers and getting them to fight others. But the real story of religion is that there never was a god, only larcenous, lying, career Godmen insisting there was. You now know the truth. Religion is poison. Please save the world from it.

Appreciation

I wish to thank the rival religious retail brands, the Lutherans, Baptists, Pentecostals, Jehovah's Witnesses, Unitarian Universalists, New Agers, Seventh-day Adventists, Mormons, Hasidim (in the USA), Catholics (in France, Spain, Mexico and Brazil), and the Jains, Sikhs, Hindus and Muslims (in India) for showing me their religions.

My sentiments

The religions of the *sacred* books are like addictive street drugs. Religions offer an addictive high. I found that devout believers end up addicted to the high just to feel "normal," because going without it feels bad. The need for the high completely takes over one's life and blocks one's potential. With the high comes the religious view of things, that a super dad in a heaven is waiting to receive your soul at death if you allow yourself to be addicted to the high. But you are your brain. There is no supernatural soul. It's made up.

The scientific view is one of investigation and discovery about how things really are. People who go this secular route in life get attacked by the religionists for not being one with them. If you won't join them, you're fair game for scorn, ridicule and even killing by believers made irrational and hateful by their religion. But the bottom line is this: Whether you are female or male, only one of millions of sperm cells from your father made it to the union with one ova from your mother to result in you. Each of our bodies, our lives and our health is the result of a random, almost miraculous chain of chemical events. And then, here we are, on a rare planet in a good location in an average galaxy. But, we didn't win the cosmic lottery. We naturally evolved in one cosmic lottery's winning numbers—the laws of physics—in this universe that those laws of physics have generated. So, should we nuke each other for a daddy-in-the-sky god, for a religion that infects our brains? I say no. And you?

About the author (in the first person instead of the third person like other authors do)

I was born to devout Christian (Missouri Synod Lutheran) parents, whose ancestors were Vikings, Celts, French-German Ashkenazi, Neanderthals (2.3%) and "white" African albinos. I quit believing in any theology. To figure things out, I became a student of religion, physics, geology, cosmology, biology, psychology, sociology, social psychology, art, business and Spanish in a San Francisco art school, and six universities including, two graduate schools. I went to India, studied Advaita Vedanta, Buddhism and Jainism, became a householder, teacher of public speaking, artist-painter, Spanish instructor and student of music theory. Now, I prefer to live a reclusive life. After five decades of life, I wrote down my findings as this book, for your benefit, not mine. It's your book. :-)

Appendices

A. Personal Responsibility

"When...the leaders say God has a plan and then millions die in tsunamis and natural disasters, millions die from preventable diseases, and millions die in wars fought for religion, let the religious followers begin to see. Let them see that there is no plan and there is no merciful, loving God. There is no plan for the world unless people make it, and there is no justice in the world unless people fight for it. Don't pray for a vision, open your eyes and find it. Don't blame devils, evil spirits, or other people for your faults and your failures. Stand up and take pride in what you do right. Stand up and take responsibility for what you do wrong. Stop believing and start thinking, stop praying and start acting, stop funding the leaders who preach about solutions and start funding solutions."

—B. Ganz

"Teaching college students about the nature of science should not be a controversial exercise. College students are expected to distinguish between astronomy and astrology, chemistry and alchemy, medicine and voodoo magic. Likewise, they are expected to accept the theory of evolution as an established scientific model, and creationism as a religious belief."

—E. Lovely

"Science is just such a better way to organize your world. Why wouldn't you?"

—M. Jensen

B. Internet resources

1) Cosmology

http://map.gsfc.nasa.gov/m_uni/uni_101expand.html

http://www.astro.ucla.edu/~wright/cosmology_faq.html

2) The Hubble Space Telescope - Heritage Gallery of Photos

<http://heritage.stsci.edu/gallery/gallery.html>

3) God Is The Machine

<http://www.wired.com/wired/archive/10.12/holytech.html>

4 Christianity and American politics

http://en.wikipedia.org/wiki/Tim_LaHaye

5) A typical list of university courses

<http://www.stanford.edu/dept/registrar/bulletin/69242.htm>

6) Maslow's Hierarchy of Needs

<https://www.simplypsychology.org/maslow.html>

7) Non-religious spirituality

https://en.wikipedia.org/wiki/Advaita_Vedanta

<http://www.naturalism.org>

8) How breeding over generations made changes in appearances and behaviors

http://www.akc.org/breeds/complete_breed_list.cfm

<https://www.bbc.com/future/article/20230428-the-puzzle-of-neanderthal-culture-and-aesthetics>

9) Science Dictionary

<https://www.sciencedictionary.org/>

10) Klamath Lake blue-green algae

[http://en.wikipedia.org/wiki/Aphanizomenon_flos-aquae_\(dietary_supplement\)#Nutrients](http://en.wikipedia.org/wiki/Aphanizomenon_flos-aquae_(dietary_supplement)#Nutrients)

11) The Human Family Tree

<http://www.ramsdale.org/dna7.htm>

<http://www.genome.gov>

12) The Big Telescopes

<http://www.nytimes.com/2008/01/05/science/space/05scope.html>

<http://www.jwst.nasa.gov>

13) Mars Colony

https://en.wikipedia.org/wiki/Colonization_of_Mars

14) The 4-way Test

https://en.wikipedia.org/wiki/The_Four-Way_Test

15) How to start to colonize space

http://www.space.com/adastra/070316_orbital.html

16) Become an effective speaker-presenter

<http://reports.toastmasters.org/findaclub/>

C. Amateur Preacher

This was an email that thousands of people received that attempts to steer Christian believers and promote a religious-political agenda in the United States.

[A famous American preacher's daughter] was interviewed on [a major TV morning show] and asked "How could God let something like this happen?" [Regarding the attacks on Sept. 11, 2001.]

She gave an extremely profound and insightful response. She said, "I believe God is deeply saddened by this, just as we are, but for years we've been telling God to get out of our schools, to get out of our government and to get out of our lives."

And being the gentleman He is, I believe He has calmly backed out. How can we expect God to give us His blessing and His protection if we demand He leave us alone?

In light of recent events...terrorists attack, school shootings, etc. I think it started

when [atheist] Madeleine Murray O'Hare...complained she didn't want prayer in our schools, and we said OK.

Then someone said you better not read the Bible in school...the Bible says thou shalt not kill, thou shalt not steal, and love your neighbor as yourself. And we said OK.

Then Dr. Benjamin Spock said we shouldn't spank our children when they misbehave because their little personalities would be warped and we might damage their self-esteem. We said an expert should know what he's talking about. And we said OK.

Now we're asking ourselves why our children have no conscience, why they don't know right from wrong, and why it doesn't bother them to kill strangers, their classmates, and themselves.

Probably, if we think about it long and hard enough, we can figure it out. I think it has a great deal to do with "WE REAP WHAT WE SOW."

Funny how simple it is for people to trash [the Christian] God and then wonder why the world's going to hell. Funny how we believe what the newspapers say, but question what the Bible says.

Funny how you can send 'jokes' through e-mail and they spread like wildfire but when you start sending messages regarding the Lord, people think twice about sharing.

Funny how lewd, crude, vulgar and obscene articles pass freely through cyberspace, but public discussion of God is suppressed in the school and workplace.

Are you laughing? Funny how when you forward this message, you will not send it to many on your address list because you're not sure what they believe, or what they WILL think of you for sending it. Funny how we can be more worried about what other people think of us than what God thinks of us.

Pass it on if you think it has merit. If not then just discard it... no one will know you did. But, if you discard this thought process, don't sit back and complain about what bad shape the world is in!

Were you pulled in? Did you find yourself agreeing with the line of religious thinking here? Or were you able to analyze it and see its many faulty premises, irrationally linked occurrences, and its guilt-inducing conclusions?

Does it make you feel that we would be better off with a religious form of government than a secular government? It was intended to motivate you to join the writer's religious cause via guilt. It opened with a dose of guilt and ended with another. Guilt is the most common device used by fundamentalist religions to recruit and to hold members. It removes your self-esteem and replaces it with group-esteem. Everyone being guilty of *original sin* is the mother of all guilt techniques to cause people to submit to religions and their leaders.

Did you notice the reshaping of the god of the Hebrews in the Old Testament into a modern, sensitive male? The war god that had such bravado and vengeance in Moses' stories, in this email is now a quiet, retreating, saddened *personage* with the demeanor of a dignified elderly "gentleman" straight out of our culture. People change the image and nature of their god(s) to the style of their era and to suit their own emotional needs and wants.

This is popular propaganda. Propaganda is an intentional attempt to shape others' perceptions, manipulate their thinking, and alter their behavior to achieve results that the propagandists and/or their employers want for their own gain. Emotional outrage is the most effective way to spread propaganda among the emotional and irrational masses. Countering

with satirical mocking is ineffective. French cartoonists at *Charlie Hebdo* were gunned down by Islamists. (See <http://www.bbc.com/news/world-europe-30808284>)

D. How Groupthink Works

Groupthink is a term first used in 1972 by psychologist Irving Janis to describe a common process in which a group can make bad or irrational decisions.

Symptoms of groupthink

- 1. Insulation of the group*
- 2. High group cohesiveness*
- 3. Directive leadership*
- 4. Lack of norms requiring methodical procedures*
- 5. Homogeneity of members' social background and ideology*
- 6. High stress from external threats with low hope of a better solution than the one offered by the leader(s)*

Janis listed eight characteristics indicative of groupthink:

- 1. Illusion of invulnerability*
- 2. Unquestioned belief in the inherent morality of the group*
- 3. Collective rationalization of group's decisions*
- 4. Shared stereotypes of outgroup, particularly opponents*
- 5. Self-censorship; members withhold criticisms*
- 6. Illusion of unanimity*
- 7. Direct pressure on dissenters to conform*
- 8. Self-appointed "mindguards" protect the group from negative information*

The seven symptoms of a decision affected by groupthink are:

- 1. Incomplete survey of alternatives*
- 2. Incomplete survey of objectives*
- 3. Failure to examine risks of preferred choice*
- 4. Failure to re-appraise initially rejected alternatives*
- 5. Poor information search*
- 6. Selective bias in processing information at hand*
- 7. Failure to work out contingency plans*

Source: <http://en.wikipedia.org/wiki/Groupthink>

The Square Earth: A model from Christian groupthink

The Book of Revelation model with four angels standing on the four corners of the Earth: http://en.wikipedia.org/wiki/Flat_Earth#/media/File:Orlando-Ferguson-flat-earth-map_edit.jpg

E. Changing One's Mind

"Faced with the choice between changing one's mind and proving that there is no need to change...almost everybody gets busy on the proof."

—John Kenneth Galbraith

"Your first duty is to abolish your ignorance, and only you yourselves can do this."

—Buddha

F. If Stars Were Druggies

From astronomer Robert J. Nemiroff's *The Main Sequence Blues*:

"Once upon a time there was a five-solar-mass star named Brutus..."

Thus begins a story about stars as a gang of druggies. The leader gets high on helium. He pressures the others to join in: <http://apod.pl/htmltest/gifcity/msblues.html>

.....
Note: In our classes where many of the teenage students had been drug users and dealers, this story made a huge impression. They gained some insight into being coerced by peer pressure. They also learned some basic, stellar physics in a remedial school where no physics class was offered.
.....

G. Religion Slowly Fading

But not fast enough. (See <http://www.bbc.co.uk/news/science-environment-12811197> and <http://www.christianpost.com/news/mars-hills-church-closing-at-least-3-regional-locations-126025/> and <https://www.yahoo.com/movies/s/largest-christian-book-chain-u-files-bankruptcy-002906789.html> and http://www.huffingtonpost.com/steven-reiss/four-reasons-for-decline-_b_8778968.html?ncid=txtlnkusaolp00000592)

H. Are You Deprogrammed?

How many years did you spend in religion and how deep was the programming driven into your head? How many years has it owned you? So then how will you know if you're completely deprogrammed from the ignoble theology, the ideology that has possessed us for generations? If you get upset, offended or infuriated by this book, you are still owned by the theological programming that has you as its host, servant and expendable protector. So what

to do to get free? Reread this book and each of the blue links to uninstall the religious programming and defrag your brain.

I. "But where's the proof that my religion is wrong?"

If god were real, religions could not exist because belief and faith would be replaced by direct contact. As long as god remains a ghost-in-the-sky concept, religions can thrive. Who keeps god a ghost-in-the-sky concept? Follow the money. It's religious leaders!

J. "God's greatest invention"

It was a beautiful, sunny noon hour on campus. Three new college students were sitting on a bench, under the shade of a tree, opening their bags, taking out their sandwiches and drinks. One was a physics student, the second an architecture student and the third a theology student.

Freshman physics student: "Have you guys seen photos of the Large Hadron Collider, the gigantic atom smasher that they built in Switzerland? Physicists there found the particle that gives everything in the universe its mass! This machine will go down in history as mankind's greatest achievement."

Freshman architecture student: "Ha. You have no clue! The greatest achievement of mankind was the invention of the structural arch. Without it we'd have no bridges, thus no transportation and no civilization. We'd still be living like primitive nomads wading across rivers, hunting animals with spears."

Freshman theology student: "Well, you atheists can argue all you want about man's greatest achievement, but I can tell you that God's greatest invention is this thermos right here in my hand. It miraculously keeps coffee hot or lemonade cold— further proof, my disbelieving friends, that God works in mysterious ways!"

The secret to becoming more aware is to read and get new areas of knowledge that one has never been exposed to or tended to avoid. Study science. Thermo-insulation?

K. How to Start a Faith-based Scam

"I would ask for tithes. I would offer tons of intangible benefits that could not be confirmed. I would not want people to ask questions so I would tell them asking questions was a sign of lack of faith. I would demand people stay in the church and bring others into the church. Any contrary evidence would receive 'spin' treatment explaining that it is either a 'test of faith' or is somehow beneficial. I would claim that any random natural occurrence was divine punishment, etc."

— Anonymous person on Reddit.com

